

# Break

## Judge's choice

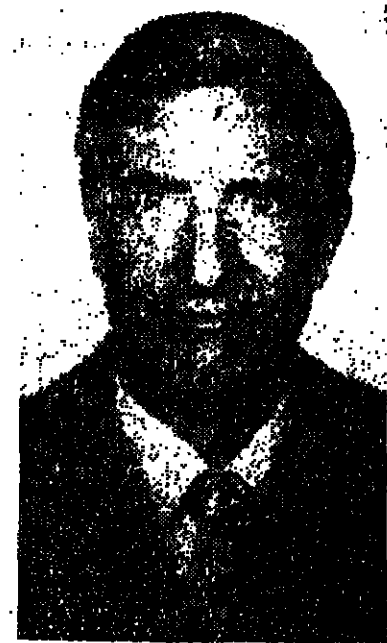
Amid the furor caused by Hugh "Amis" Amis's rejection of his £7,500 Arts Council Award for *An Unsettled History of the World*, the smaller furor caused by the choice of Colin Davis's *The Animals of Farthing Wood* (Heinemann) as the winner in the children's book category have gone virtually unobserved. Yet another £7,500 of public money has been awarded for a novel not highly thought of among children's book critics and selected by Sir John Betjeman, presumably on the strength of his having written one children's book, *Archibald and the Street Beggars*, the literature director of the Arts Council, claims that Sir John was their first choice to judge this category being "someone known to be interested in children's books and a distinguished writer." He that as it may, why was there only one judge in each section? "Because," says Mr Osborne, "we felt committee decisions are usually the wrong ones." Perhaps the Arts Council's decision in this case, made by about 20 people, bears this out.

Each of the judges—the others were Kingsley Amis for fiction and Dame Veronica Wedgwood for biography or history—received £2,000 for their pains. Yet, with all this Arts Council money slopping around, the judges' reports are not automatically available to the public who pay for them. A newspaper wishing to publish one of the essays is required to pay a fee. Public money, it seems, can be spent at the behest of three generously rewarded individuals, "lay-off" (writing for their decision on behalf of the same public. *The Animals of Farthing Wood*, described by Macy Hoffman, who reviewed it for the TES, as "old-fashioned, but not old-fashioned," was chosen in preference to such others as Alan Garner's acclaimed *Stone Book* (Collins/Poetry) and Faith Jacques' charming picture book *My House* (Heinemann). Sir John insists his choice by saying that the winner "looks like a book, even when the dust-wrappers are off... it is good reading and the

illustrations, all in black and white, leave room for the imagination. They are secondary to the text. The theme is an engaging and touching one—a theme somewhat reminiscent of that monumental bestseller *Watership Down*, which goes some way to explain the publicity accorded this book by its publishers, though they turned it down initially some years ago.

The pity of it is that there will be no children's book category next year, and perhaps only every three years or so thereafter. What an opportunity lost.

## Ready for battle



Dr. Alan Russell: Don't be kind to bureaucrats.

Next month he takes up the post of Director of the Inter-University Centre for the Study of the History of the British University, the 35 years has been channelling the resources of British universities into the development of Commonwealth universities. But an enormous question mark hangs over the future of the council. The recent quango-busting White Paper gave it short shrift. It had been set up to help in the creation of new universities in emerging Commonwealth countries, the report said. This task was largely completed, and the IUC's

mission was to act as an administrator of educational aid was duplicated, in a large extent, by the work of the British Council.

So the IUC is to be drawn into the British Council. The IUC's fight, some say, is now going on between the British Council, the IUC, and the Overseas Development Administration which funds it, about its future and how its autonomy can be maintained.

Naturally the IUC is extremely unhappy about all this. It says it was not created with the sole, and obviously short-term, aim of helping emerging countries set up their own higher education institutions, but to encourage continuing international academic collaboration.

It is also at pains to point out that although it is almost entirely government funded, it is nevertheless a private company set up by the British universities. Its work—recruitment, staff development, fellowships, grants and academic links—is based on voluntary collaboration within the academic community, and as such quite different in emphasis and tone from any state work done by the official government cultural agency.

These differences, however, can escape casual outside observers who tend to see in the British educational aid programme an alarming degree of muddle, duplication and internal disagreement, all overlain by a continuing succession of reviews and reports.

Into this difficult situation steps Dr. Russell, replacing the IUC's retiring director, Mr. Richard Griffiths. He comes fresh from a European job presenting Community policies in international arenas, and as such is probably as well equipped as anyone could be for the bureaucratic wrangles that lie ahead.

For one thing, he says, he is quite used to notions of rationalizing and economizing, and can see there is overlap in the field in which the IUC operates. "Now the IUC has to yield something in terms of policy independence, it might gain from greater rationalization." However he feels that, ideally, the time to have sorted out the IUC would have been the last four years ago when questions of its future were first being raised.

Nevertheless, he is challenged by the purely practical job of integrating the IUC's work with the work of the British Council. When asked about his plans he says he would like to build links with analogous institutions in other countries, but then says that although that might sound good, it doesn't really mean a great deal.

For a bureaucrat he is unusually objective, even towards his own kind. "You mustn't be kind to bureaucrats," he says. "It just means they sit back and do nothing." He also has an unerring habit of turning questions back on the questioner.

Those joining battle with him over the future of the IUC can expect to have a tough time, while an obvious healthy scepticism makes it unlikely that the new director will be taking up his post without having thought about exit routes, should he no longer have a council to head.



Probably because of the government health warning.

## Rising stars

There was more than a touch of paternal pride in the introduction by Alec Ross (now a pro Vice-Chancellor) to Neville Bennett's inaugural lecture at Lancaster last week. Ross started education at Lancaster in 1967 and Bennett was one of the first students to take the Lancaster BEd. He then went to the University Department of Educational Research as a research student before becoming a lecturer in the same department.

In due course when Noel Entwistle, the migrated to Edinburgh, Bennett (then of Teaching Styles and *Pupil Progress*) fame) got the vacant chair, Lancaster has certainly made its mark in education and part of its success is surely due to its knack of appointing rising stars to senior posts. The present head of department, Gareth Williams has

added an unusual planning session to the department.

When Bennett returns to the United States to take up his post as head of department, we look forward to even more controversial *Lecturing Styles and Progress*, assuming that it does allow access to his and tutorial as readily as teachers did to their lessons.

## Time is money

Students prepared to burn the night oil are likely to see new virtue in the eyes of administrators, whatever teachers think.

Imperial College has just cut out why its electricity bill by nearly £5,000 last month. It opened because a student came in the middle of the day for an experiment which involved running 100 hp motors for half an hour.

The actual amount of consumed was not very few pounds' worth at domestic rates. But like many institutions which use a lot of electricity, Imperial College is charged a special tariff under which cost per unit depends on the amount of electricity used in the evening. Every bit of additional electricity used in the evening is charged at a premium. It is this which pushes up the price of all its electricity.

Had the student run the motors in the evening the cost would have been tiny. Instead he charged the college with a crucial peak time.

The consultants who have been advising Imperial on how to cut fuel bills point out that if wood is to be believed, great fire breakthroughs always come in the small hours.

Arts

## Next week

Monday's children: extracts from the winning entries in the competition. *Pressure* by Biddy Farnsworth on the Arts Centre for Education. *Review* by Elvin reviews three new books. *Review* by Philip Jacobson reviews *Progress* (fame) got the vacant chair. Lancaster has certainly made its mark in education and part of its success is surely due to its knack of appointing rising stars to senior posts. The present head of department, Gareth Williams has

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Tim Francis, who won The TES "Monday's children" competition. Extracts from the winning entries pages 20 and 21

## Free schooling system in growing danger

Free education, the fine principle enshrined in the 1944 Education Act, is now sounding increasingly hollow. Growing numbers of parents and children are being asked to pay for schooling. Pending cuts take their toll on

text books, paper and equipment. Bingo evenings raise cash for sports equipment, girls go modelling to pay for books and parents clean, paint and repair their children's schools. Philip Venning reports on the cash crisis.

## Scandal as parents foot bills for books

The free education service is beginning to break down. Parents throughout the country are being forced to pump thousands of pounds into schools to pay for basic text books and equipment that used to be provided free. Local authorities are no longer equipping schools with the materials needed to maintain educational standards.

In some areas, spending cuts have forced head teachers to devote more and more of their time to fund raising to pay for essential teaching aids and services. And, in extreme cases, parents have offered to pay the salaries of extra teachers. The increasing injection of personal money into the public service may be illegal. The 1944 Act says local authorities must not charge any fee "in respect of the education provided" in any school or college. The uncertainty arises because the money is treated as donations.

But despite the doubt over the legality, one thing remains clear: parents and pupils are left in no doubt that if the local authority does not provide money for text books, it has to come from somewhere else. So E10 a head donations have been sought from parents of St. George's School, Gravesend, sixth formers at Cirencester School, Gloucestershire, paid a £10 levy

each towards their books; and a teacher's wages at Lewin School, Oxfordshire, are being paid for two years by several voluntary groups, including *Living Magazine*. Even pupils at primary schools are being asked to pay. Contributions of 2p a week are sought from children in a Nottinghamshire junior school so that classroom libraries can have a dictionary.

And now a Conservative MP for North Devon, Mr. Gerry Neale, has introduced a Bill into the Commons which aims to clear up the legal uncertainty and allow local authorities to accept voluntary financial aid to supplement voluntary services.

TES special survey. Page 10.

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TES special survey. Page 10.

## Urgent tests made for killer asbestos

Urgent tests for deadly blue asbestos dust were being carried out at Danforth School, Bishopton, Green, in London this week. Samples of air and dust in this inner London Education Authority school were being taken by independent experts to see if staff and pupils are in any danger.

The existence of blue asbestos in the fabric of this boys' comprehensive has been known for some time. As a temporary measure it has been "sealed" with paint on the advice of the health and safety inspectors. ILEA say they aim eventually to remove it altogether. But in response to complaints by staff, ILEA asked independent consultants this week to check the levels of asbestos in the school. Asbestos can cause lung cancer and cancer that may not be apparent until years after exposure to the dust. Blue asbestos dust is reckoned to be 10 times more dangerous than other varieties. The industrial danger limit is the equivalent of just one microscopic fibre in five cubic centimetres of air.

## TES Literary competition

### Competition No 2

Report by Charyllye

Ambrose Blykes was odd even by authorial standards of eccentricity. Born in 1842, he served with distinction in the Union Army, in the American Civil War. Later, in San Francisco, he worked in a mine before gravitating into journalism, where the unflinching acerbity of his pen won him enormous West Coast celebrity. A visit to London in 1872 was a further triumph. Later, he was to try his hand at goldmining and, after ignominious failure, returned to journalism. He appeared in Mexico in 1913 in circumstances unimpaired to this day.

The hundreds of biting satires on the poets and novelists of his time, his incisive make-up, his *Devil's Dictionary* appeared in 1881 and 1886. He is otherwise remembered for a clutch of short stories, including the haunting *Light in the Dark*, *Bridge*, whose final, grotesque has been lost by several later writers. A definitive life and assessment of this remarkable man would be exceedingly welcome.

Competition rules creditably to the challenge of evaluating his

misanthropic wit (the mask possibly for strong but strongly repressed feelings). Definitions did not have to be about matters educational, but the majority were. Such topics were, understandably enough, the ones that most competitors felt most strongly about.

The cynicism of some definitions would have had even Blykes goggling; but seriousness alone is not enough; there has to be incisiveness as well. Thus, if T. Griffiths's definition of "Chemical Warfare" had read simply "Cosmetics," it would have won him a pound; as it is, the comparative heavy-handedness of the production and promotion of cosmetics for profit, used by women against men in the battle of the sexes, earns him only a commendation.

Some of the nearest entries were, alas, spotted as having already won prizes in similar competitions elsewhere. I hope no other originals have slipped through the net, but apologies to their true benefactors if they have. No need, incidentally, to write enclosing letters when competing; while notes pleading for explanation or mock-modestly excusing entries tend to be counter-productive. A pound for each of the definitions that appear below.

Contractual commitment: expectation of hours, leading to contraction of commitment.

Rational: irremediable.

Life: This miserable interim between two good movies.

Teaching practice: aversion therapy for vocational dementia.

Student militancy: bling the hand one is subsidized to sit at the feet of.

Divorce: a process whereby people who have failed in one marriage are legally authorized to involve others in similar disasters.

Ecumenical: Christians huddling together for mutual support in an indifferent world.

Consensus: harnessing apathy.

Open plan: a design so cheap that it ensured the discovery of educational reasons for its adoption.

Sex education: the blind leading the groping.

Teachers' superannuation: penance for heaven.

Alcohol: destructive preservative.

Abortion: interception of an unidentified intruder.

Monetarism: revival of the far top.

Committee: way of spending hours over minutes.

Deputy Head: Ponting; Pilate's bodyguard.

Creative writing: a rearguard of last night's TV.

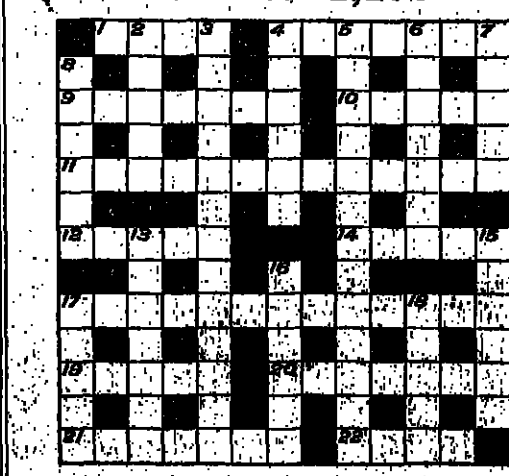
Sex education: telling children who does what to whom with what but not why.

Mixed ability teaching: promiscuous use of badly-printed worksheets.

Inquiry methods: the PhD approach to eight-year-olds.

Teacher training college: a sanctuary for theorists who failed the practical.

## Crossword No 1,186



### Across

1 The "oil" can (4).

2 Naturally a common (5).

3 A common (5).

4 A common (5).

5 A common (5).

6 A common (5).

7 A common (5).

8 A common (5).

9 A common (5).

10 A common (5).

11 A common (5).

### Down

2 A line or two (4).

3 A common (5).

4 A common (5).

5 A common (5).

6 A common (5).

7 A common (5).

8 A common (5).

9 A common (5).

10 A common (5).

11 A common (5).

12 A common (5).

13 A common (5).

14 A common (5).

15 A common (5).

16 A common (5).

17 A common (5).

18 A common (5).

19 A common (5).

20 A common (5).

21 A common (5).

## Next competition: free verse fury

Competition No 3 Set by Charyllye

Bad free verse is appallingly easy to write: good free verse very hard. One of the few to bring it off lately, often was D. M. Lawrence, notably in his initial poems and his "Psalms" (or *Psalms*)—well

represented in the *Poet's Selected Poems*. There must be 1980 (the fiftieth anniversary of death) be many topics, but to arouse Lawrencean fervour, up to 16 lines, a contemporary "Psalms" (or *Psalms*)—well

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That schools of all sorts and in almost all parts of the country are having to turn to parents to help pay for basic books and teaching materials (page 10) raises fundamental questions about the extent to which the principles of free education are being eroded. This is not some petty administrative matter that with luck and local legerdemain will disappear—which seems to be the Government attitude. All the signs are that it will become worse as the next round of cuts take effect, and capitation is squeezed still further.

Not surprisingly, and generally against their better judgment, many heads have realized that contributions from parents offer one way of maintaining basic standards in their schools. And many parents, understandably, are willing to pay out, say, £10 a year to ensure their child has the textbooks it needs, even if it is really the local authority's duty to do so.

Part of the problem is that the nature of that duty has never been tested in the courts. Section 8 of the 1944 Education Act says that local authorities should provide schools which must be "sufficient in number, character and equipment" to give all pupils opportunities for education appropriate for their needs.

Obviously there is no sensible way of specifying in law a national minimum amount of books and equipment needed to be "sufficient". It would be ridiculous to state that every child should have at least two new textbooks, five red pencils, and three exercise books. But without such a definition it simply becomes a matter of the individual head's assessment of his "needs". Some may be content to teach with battered and outdated books, others may insist on having the latest editions.

As Gerry Neale, the energetic MP for North Cornwall, pointed out in the Commons, the law on voluntary contributions from parents or anyone else is even vaguer. Apart from Section 61, which



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## The end of free education as we knew it?

outlaws the charging of fees, and Section 85, which allows local authorities to accept gifts of property, there is nothing to guide the would-be benefactor. In practice the tradition has grown up that parent-teacher associations can contribute towards the extras, but that the essentials should remain the responsibility of the local authority.

The most unpalatable aspect of the present haphazard way in which some parents are now paying for bread-and-butter items is that the quality of education offered by a school will increasingly depend on the prosperity of its neighbourhood. Of course, wide discrepancies between schools already exist. Some local authorities are generous with capitation (within spending limits).

Others are less so. And however desir-

able it is that a child's education should not be affected by the size of his parents' purse, the very nature of any fund-raising means that children from middle-class areas are more likely to attend schools with their own video-recorders and minibuses. But the whole direction of post-war education policy has been to try to reduce those inequalities in education that arise from the different wealth of school catchment areas. To abandon this principle, even with the aim of protecting teachers' jobs (the effect of concentrating the cuts on capitation) would be a reversal no less serious for being unspoken.

At one extreme the most egalitarian solution would be to ban all forms of parental fund-raising. This would sidestep the problems of defining essentials, and could eliminate the fear that local

authorities are cutting capitation in the knowledge that parents will make good the shortfall. Fortunately this is as unthinkable an option as the opposite extreme which would be to hand over responsibility for buying books and some materials to parents (like school uniforms, there could be means-tested grants) for make some standard charge like prescription charges.

In between the extremes there are the teacher unions (restrict voluntary contributions to the extras) and Gerry Neale, John Grignon of the Association of County Councils, and others (tell the schools they can accept any help they like, including the payment of teachers' salaries).

The answer is not simply one of political philosophy. A silver lining to increased voluntary activity in schools is that it is giving parental involvement in schools far more substance than any number of worthy words in the Taylor report and elsewhere. If parents are paying for the books, of course, the next step may be that they will want more say in what is taught. Although this has obvious dangers, it would be a pity not to nurture an otherwise desirable growth in interest, and home support.

But in the long run no education service can depend on amateur help, nor is it certain that current parental involvement will just be a matter of tidying schools over until better times.

Since fiddling with the system will not produce any satisfactory solutions, what is likely to happen in most areas is that the issue will continue to be fudged.

The only real answer, if the whole education system is not going to become increasingly inequitable, is to restore the cuts in capitation. As long as central government spending pressures remain, i.e.s will be forced into difficult decisions about priorities. It is as well that they should be clear about what is happening and its consequences.

## Comment

### The political football season kicks off again

Now that the head teachers have duly voted to re-elected and returned Labour councils in a majority of town halls, the shuffling of caucuses and committees and chairmen is proceeding at its usual democratic pace up and down the country.

In some cases the new teams have already committed themselves to phasing out remaining grammar schools, the Secretary of State is willing (and he is not alone in hoping for a result) in the hiccups in progress to end from comprehensive reorganization every time the local political leadership changes, though not without his share of blame in this matter.

It can be expected, too, that some of the new Labour councils will express a greater degree of interest in jobs and education generally than the effect of central government cuts, though they may not yet be any clearer than the rest of us how this might be done.

The most important influence on spending power and priorities in fact will be the outcome of the negotiations now taking place between Whitehall, local authorities and local authority representatives on how the new block grant is to be allocated. Since the local decisions have now been made in Labour majority on the Association of Metropolitan Authorities, it is likely that the bulk of the grant will be allocated to the Labour areas. This is not a new development, but it is not a new one. Owing to the fact of time, that passes while committees meet and bills that July by the time the new year begins, the new grant will be allocated to the Labour areas before the leaders for the Council of Local Education Authorities emerge, and this means a prolonged interregnum at a critical time. By July it is likely that decisions about block grants will have been made.

Stronger than though there is little doubt that Labour-controlled AMAs will be able to do so, it is likely that the most important influence on spending power and priorities in fact will be the outcome of the negotiations now taking place between Whitehall, local authorities and local authority representatives on how the new block grant is to be allocated. Since the local decisions have now been made in Labour majority on the Association of Metropolitan Authorities, it is likely that the bulk of the grant will be allocated to the Labour areas. This is not a new development, but it is not a new one. Owing to the fact of time, that passes while committees meet and bills that July by the time the new year begins, the new grant will be allocated to the Labour areas before the leaders for the Council of Local Education Authorities emerge, and this means a prolonged interregnum at a critical time. By July it is likely that decisions about block grants will have been made.



Crobie supporter's report

### The case of Mrs Crobie

As the case of Mrs. Elsie Crobie, the Nottinghamshire nursery teacher, who was suspended, then dismissed, for refusing to teach a class of 40, escalates into a major employer-union confrontation (page 8), it is important to remember how it all started. Last autumn, Nottinghamshire closed a third of its education cuts, by reducing the number of nursery teachers they employed by 135. So, at the beginning of the year, Mrs Crobie found herself in charge of 40 three- and four-year-olds with one assistant. She protested, and the union was forced to support her. You might say Nottinghamshire were unlucky. They were cutting mainly young, low-

paid women in a job where there was plenty of "natural wastage" and little strong union representation. The NUT were unlikely to make more than a token protest—and indeed, did not. Mrs. Crobie was the joker in the pack.

So far as the AMA education committee is concerned, it is a fair bet that there will be a change of pack on the conditions of service negotiations, a supposition which the teacher unions may well have gambled on in their determination not to be hurried into trade-offs. It is probably now agreed on all sides that it is in teachers' interests as much as anyone else's to arrive at an agreement that will give them good conditions—rather than be seen to worsen them. What the Labour members of the AMA education committee recognize is that it took years of patient bargaining to sort out FE conditions of service, and that they are hardly likely to carry the teachers with them under any hint of duress.

There are possible ways out of the difficulty. One or two Nottinghamshire nursery units have been managing large numbers with a rota of parent helpers. As an ad hoc solution, and with parents who fit in, that can undoubtedly work. But again, the nature of the teacher's job changes. Teachers have to become organizers of voluntary workers, and have less time to work directly with children.

It may be that this kind of change, properly thought out and financed, is desirable in nursery education. All the research shows that nursery classes are most effective when parents are closely involved, and using volunteers under the direction of qualified teachers is one way of reaching more children. But it demands careful planning and special training. Unplanned, as part of a sudden cut, it simply increases the built-in inequalities between different families and neighbourhoods.

Mrs Crobie courageously chose to draw attention to the results of Nottinghamshire's policy, and not to muddle through in true British style. She then accepted a compromise, helped by parents who were prepared to have their children attend fewer sessions to keep numbers down. The authority did not; they stood on the principle that Mrs Crobie had refused to teach a class of 40.

The cost of their principles is alarmingly high in educational, industrial relations, and cash terms. Thousands of children are missing in days of school. NUT members, both primary and secondary, have found a cause which solidly united them in an area with no history of militancy. And the council must meet the high legal and administrative costs that go with industrial tribunals.

### Highbury Grove for ever

One man's victory is usually another man's slip in the race, and the Education Secretary's 1980-81 strategy in teaching young children is a case in point. From an advertisement for a post in a First School.

down for the unfortunate staff of the neighbouring Sir Philip Magnus comprehensive school.

There is little doubt that Mr. Mark Carlisle must have been swayed by the extent of popular support for Highbury Grove, with a petition signed by 26,500 people against its closure.

But despite headlines proclaiming its rescue "from the axe", it is worth pointing out that Highbury Grove was never really in danger of closure in any real sense.

As Professor Eric Braithwaite emphasized last week when presenting the results of his government-funded research on the effects of closing schools, it is now widely agreed that it is far better for all aspects of the health of the education service if the brutality of outright closure is avoided when demographic trends dictate fewer schools, and amalgamation chosen as a method fair to both children and teachers.

To amalgamate two schools you first close them both, in a technical sense only, and then reopen a new school on the site of one. The right of both former schools then have the right to compete for all posts in the new school. It is almost inevitable that the teachers of the larger and best known school will remain on its own site, will remain dominant.

ILEA's much castigated planners and administrators were proposing a copy-book amalgamation on those lines for Highbury Grove and Sir Philip Magnus, the two schools of the larger and best known school. It is almost inevitable that the teachers of the larger and best known school will remain on its own site, will remain dominant.

The main difference is that the Sir Philip Magnus staff will have little chance of winning any scale posts in the temporarily enlarged Highbury Grove school, since the staff there will all be able to remain in their jobs. The Sir Philip Magnus teachers, however, will be asked to accept a very real loss of status and pay, and to be redeployed elsewhere, with correspondingly slender hopes of head of department jobs in a declining market. Market force punishment for working for a less popular school.

If such a seemingly unfair way of managing the merger was to be regularly adopted by the Government there would be some grounds for worry. Perhaps we had better accept that the Friends of Highbury Grove have been able to make out a very special case of excellence which does not necessarily set a precedent.

### No comment

A Deputy Head (Group 5) Required. Salary £19,000. Further information in teaching young children is a case in point. From an advertisement for a post in a First School.

## NEWS

### Decision to 'save' Highbury Grove means neighbouring comprehensive must close

## Morale drops as merger is rejected

by David Lister

The Government's decision to bow to parental pressure and "save" Highbury Grove—the school where Dr Rhodes Boyson, junior education minister, was headmaster—has sent teacher morale plummeting in the neighbouring comprehensive which will now have to close.

The decision this week by Mr. Mark Carlisle, Education Secretary, to turn down the Inner London Education Authority plan to amalgamate Highbury Grove and the smaller Sir Philip Magnus school on the Highbury Grove premises follows a concerted campaign by parents who compiled a 26,000 signature petition to keep the school open with its present staff and name.

But Mr Carlisle's decision flies in the face of the government-funded report on fulling rolls which last week urged as its central recom-

mendation the amalgamation rather than closure of schools, so that staff from both schools can apply for posts in the new school on an equal footing.

The Education Secretary acknowledged that considerable public pressure had caused him to turn down the merger plan.

With all the Highbury Grove teachers now able to stay in their present posts, the 36-strong staff at Sir Philip Magnus school were seeing ILEA education officers yesterday to discuss their future. It seems likely that they will either be redeployed within the authority, or possibly, that some will be allowed to join Highbury Grove.

The head of Sir Philip Magnus, Mr. David Burt, said this week that he did not yet know what was going to happen to the teachers and himself and did not intend to comment at this stage. But he had said that if staff were to go to Highbury Grove without a guarantee of the



Mr Norcross: happy and relieved



Mr Carlisle rejects ILEA plan.

same responsibility, it would cause a "multitude of problems including damaged careers".

The head of Highbury Grove, Mr. Laurence Norcross, said: "I am happy and relieved largely on behalf of my staff, that the school is going to be allowed to continue in

its present form without any threat to its politics, outlook and ethos." The chairman of Islington Labour Party, Mr. David Hill, said this week: "The fact that Dr Rhodes Boyson is a minister in the department and this decision has been reached cannot be coincidence."

### Pay deadlock likely to go on despite breakthrough

by Richard Gardner

Staffs were just beginning to return to the faces of teachers' negotiators last weekend as local authority leaders dropped their insistence on the 1980-81 pay claim being linked to a new agreement on hours and conditions of service and increased their offer from 10 to 13 per cent.

But hopes of a relaxing Bank Holiday away from the trials and tribulations of "Burnham" were quickly dispelled by a Sunday newspaper report that the effect of the Clegg recommendations would be to overpay teachers by as much as £240 million because of an error in the calculations on pay comparability.

However, when the two sides got together again this afternoon to discuss the 1980-81 pay claim it looks as though this second hurdle can be swiftly overcome—although whether this will lead to them reaching agreement is unlikely.

The Sunday Telegraph, which caused the confusion, said Professor Clegg had made mistakes in the number of salary increments gradually received by teachers, and the report said a Bachelor of Education degree without honours got two increments, any other degree with honours got three, there were four for a BEd with honours and five for other honours degrees.

Teachers' leaders, local authority officials and representatives of the Department of Education and Science all agreed this failed to take two account additional increments paid to teachers for four years' study. Mr. Mark Carlisle, Education Secretary, said during question time in the Commons on Tuesday, that it appeared a mistake had been made.

Sources at the Clegg commission offered the explanation that these increments had been deliberately omitted because they would have produced unfair comparisons with other professions. Teachers, they argued, spend a year longer studying than other graduates and it would have penalized them to have included them and thus, they completed the salary of, say, a 22-year-old teacher with a 21-year-old in an alternative profession.

Both sides have agreed to implement Clegg's subject to ratification by the National Union of Teachers at a special conference in Scarborough—so the latest round of confusion over the report will have no effect on that.

The gap between the two sides will be difficult enough to bridge without any extra hurdles, though. Local authority leaders are upset that the teachers have not budged from their 20 per cent claim, and say it is bound to go to arbitration if there is no movement from the teachers' panel.

They have already warned that every extra 1 per cent will mean an extra 5,000 teaching jobs lost, and, for several authorities, reductions are certain if 13 per cent is exceeded. The teachers argue that most authorities budgeted for a Clegg increase of 20 per cent instead of 13 per cent—and therefore should be able to top up the 13 per cent offer (which is in line with government-imposed cash limits) accordingly. They further add that 20 per cent must be paid to maintain Clegg's comparability.

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### Decision to close centre goes ahead

After five months delay, Mr. Mark Carlisle, the Education Secretary, has decided to confirm his decision to axe the Centre for Information and Advice on Educational Disadvantage, a quango he threatened to close last November. It is now scheduled to shut down at the end of August.

Mr. Max Morris, the centre's chairman, reacted furiously at the news. It showed that Mr. Carlisle's "reconsideration" was "entirely spurious", he claimed this week.

He said: "An institution devoted to helping disadvantaged children has been deliberately and cruelly murdered by a callous and cynical government department. Not even a fish and chip shop would have been treated in this manner by any other minister."

Mr. Morris thought he had persuaded Mr. Carlisle to "reconsider" his decision when he led a delegation to the Department of Education and Science last December. The Manchester-based centre has a staff of 28 and spends about a quarter of a million pounds a year. It was launched by Mr. Reg Franks, then Labour minister of education, and began operating in 1975.

Several projects are now in jeopardy, including a language scheme which would have been used by the Rampton Committee which is investigating the education of ethnic minority children with special reference to West Indians.

A second project which is examining the role of dialect in indigenous children's writing will also be cut, as will another on curriculum development for deprived 14 to 19-year-olds. One on under-14s might just get finished before the axe falls.

Classes, if they tried to ban it the children would be more inclined to use it as a weapon against what they saw as white authority. Why not learn a few words of dialect instead?

Professor Little outlined two misconceptions of the race relations issue. One was to talk of "minority" when most of the black and brown children living here were born here. And it was wrong to talk of "minority" when it was true that they represented only 3 or 4 per cent of the population, but it was the concentration of that minority that mattered.

In some schools 70 or 80 per cent of the children were black, not one in 12 or in 30. In inner London the number was one in four. Until politicians recognized this, schools would be short of resources and support.

On a more practical level, Mr. Phillips suggested that teachers should not panic when West Indian children broke into dialect in their

classes, if they tried to ban it the children would be more inclined to use it as a weapon against what they saw as white authority. Why not learn a few words of dialect instead?

### Call for drug probe

A call for a Government investigation into the use of tranquillisers in children's homes was made this week by MIND, the national association for mental health.

Mr. Tony Smythe, the director of MIND, has written to Sir George Young, the under-secretary at the Department of Health and Social Security, expressing concern at the use of the drug Dephalan at Kendal House, a children's home in the south of England despite the pharmaceutical industry's recommendations that it should not be used until more clinical evidence is available.

There had been no intention of keeping the results secret, he said. The findings of a 10 per cent survey conducted last summer were still being analysed and would be published later this year, possibly in the form of a statistical bulletin. They would be purely factual and would cover mainly staffing and organization, although stocks and purchases would also be included.

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### Surveys of libraries to be published

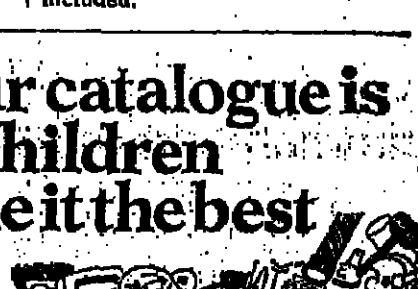
by Biddy Passmore

Regular surveys of the state of libraries in secondary schools—the subject of much criticism in recent reports—are to be carried out by the Department of Education and Science and the results published. The findings of a pilot survey will appear by the end of the year.

This initiative was brought to light through a request from Opposition education spokesman, Mr. Neil Kinnock. In a letter last week to Education Secretary, Mr. Mark Carlisle, Mr. Kinnock asked for a detailed statement on his attitude to school library provision and the effect of spending cuts on book purchasing in schools. He also asked him to publish "the 10 per cent survey of school library provision which Mrs Shirley Williams (former Education Secretary) commissioned in the department."

Now the department has revealed that such a survey has taken place, although it was not commissioned by Mrs Williams. The DES statistics branch had decided on its own initiative to start biennial surveys of library provision in secondary schools like those already carried out in further education a department official said this week.

There had been no intention of keeping the results secret, he said. The findings of a 10 per cent survey conducted last summer were still being analysed and would be published later this year, possibly in the form of a statistical bulletin. They would be purely factual and would cover mainly staffing and organization, although stocks and purchases would also be included.



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## NEWS

## Labour victors get ready to sweep away grammars

by Sarah Bayliss

Plans to abolish selective schools in up to eight big cities are going ahead after resounding Labour victories in the local elections last week.

Out of the 10 metropolitan districts which still have grammar schools, Labour gained four from the Conservatives: Bolton, Birmingham, Walsall and Kirklees (Huddersfield).

The party held Tameside with an increased majority of 16 over the Tories, and held Wolverhampton despite a 55.9 per cent rise on residents just a few days before the May 1 poll. Labour also stayed the biggest party in Liverpool despite predictions of a Labour victory in the city.

In Calderdale (Halifax) Labour reduced the Conservative majority to a minimum so that the Liberals hold the balance with nine seats against 23 Conservative and 22 Labour.

In all eight cities Labour candidates publicized their opposition to selective education and many had outlined plans for abolishing existing grammar schools. In about half, plans for reorganizing schools on comprehensive lines are likely to be submitted to the Secretary of State before the year is out.

Two other cities which still have grammars, Telford and Weymouth, have remained solidly Conservative and there the status quo in schools will be maintained.

The elections which affected 191 councils in England and Scotland outside London, showed an impressive swing to Labour, knocking down Conservative strongholds, notably Worcester, a non-metropolitan district, which they won for the first time.

The party's success in the metropolitan districts which run education services may be a sign of the growing support for comprehensive education, previously held by the Conservatives by a majority of one. Labour now has control of 31 out of 38 metropolitan districts leaving only Bury, Bolton, Solihull,



Mrs Ann Taylor: A clear mandate for comprehensives.

Stockport and Telford to the Tories. Mrs Ann Taylor, Opposition spokesman on education and Labour MP for Bolton West, said there had been clear mandates for comprehensive education in several local elections. She hoped the Secretary of State would not stand in the way of laws which now wanted to abolish selection.

In Mrs Taylor's native Bolton six grammar schools are still intact. The Roman Catholic and Church of England diocesan boards already own three grammar schools along comprehensive lines and there are three more comprehensives outside the old borough boundary.

A plan for reorganization devised in 1977 still exists in document form, but is unlikely to be resubmitted because it is out of date. Any new plan will abolish the existing six grammars and will probably divide the town in half with each group of new schools served by a sixth form or tertiary college.

In Kirklees, based on Huddersfield, newly elected Labour councillors say they've been banging the drum "loud and clear" in favour of comprehensive education. Two grammar schools remain in the Batley and Huddersfield areas. Alice Kilbury, former Tory chairman of the schools subcommittee and a keen advocate of grammar schools, lost her seat in Huddersfield by 70 votes to the gloe of her Labour opponents.

Conservative proposals to end selection at the grammar schools were rejected by Mr Carlisle earlier this year. The Labour group, whose representatives met Lady Young, a junior education minister, last week believes a less costly scheme retaining some single sex schools might win the Government's approval.

However, the education spokesman, Mr John Mearns, defends the high cost—£41m—since pupil numbers are still rising in Huddersfield and new provision is desperately needed to replace eight temporary classrooms.

In Calderdale, the Labour group will draw up a reorganization plan to change the status of the seven grammar schools which still exist in the Bailgate and Halifax areas. With Liberal support the plan could be passed by the council.

In Birmingham, the new ruling Labour group is pledged to turn the city's seven voluntary aided schools into comprehensive schools.

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Sign of the times: Painters work was all in vain. Aylesham goes comp again. Flashback to 1976 when Tameside went selective.

## Tameside all-in decision ends a 15-year battle

by Biddy Passmore

This week's Government decision to let Tameside have its comprehensive schools, an educational debate that has lasted 15 years.

Plans for ending selection in the area go back to 1965, when Lancashire and Cheshire councils submitted proposals for comprehensive reorganization which would have included Tameside. In 1974, when the area became a metropolitan district of Greater Manchester with its own education powers, the Labour-controlled council submitted its own plans, which would have turned all secondary schools into comprehensives in September, 1976.

However, these were thrown out by Conservatives when they gained control in May 1976, and an attempt by the Labour Government to force them to implement the plans ended in the famous House of Lords decision that ministers had overstepped the mark.

Labour regained control last May and immediately resubmitted comprehensive plans. Their approval this Tuesday means that the district's five remaining grammar schools and 20 secondary modern schools will make the change in September.

They will become 16 comprehensives for 11 to 16-year-olds—nine

coeducational and seven single-sex—and two open entry sixth form colleges which will be based on the former grammar schools.

Mr Carlisle's approval of the plans is in line with two other recent and controversial decisions—at Brigh and Sutton Coldfield. The Government is not following a rigid line for or against comprehensives but is taking local feeling into account. In the case of Tameside, Labour was returned to power in the last May with a virtual mandate to turn the district's schools into comprehensives.

Tameside councillors are "delighted" at the news. "I believe the future of all young people in the area will be brighter from today," said a jubilant Mr Roy Oldham, leader of the council.

The decision was reached in weeks ago, but the announcement was delayed until after last week's local polls to avoid embarrassing local Tory candidates who fought the election on pro-grammar school tickets. It also allowed the Government to take the results into account in the unlikely event of a large swing to the Conservatives, ministers might have had to reconsider their decision, which was based on the strength of local feeling.

## NEWS

## Day of action could still disrupt exams, despite TUC assurances

by Richard Garner

Schools and colleges up and down the country will shut down for the day next Wednesday as the TUC stages its day of action to protest at cuts and government policies. With transport coming to a standstill, inner city areas are likely to be hardest hit.

Hundreds of examinations scheduled for May 14 have already been postponed while there are still fears that children facing CSE papers next Wednesday may meet difficulties in getting to school in spite of TUC efforts to declare examinations an essential service.

In addition, the complete stoppage by transport workers will mean children attending special schools for the handicapped or educationally subnormal will be left without transport for the day—either relying on their parents to take them to school or staying at home.

The biggest worry has been over examinations. The City and Guilds of London Institute has already rescheduled technical and craft exams due to be by students all over the country. Mr B. B. Phillips, secretary to the institute, said: "We're not concerned about the teachers' action but the difficulty the students will have getting there."

In the north-west, the Associated Lancashire Schools Examining Board has postponed its CSE English literature, fashion, clothing and music examinations due to be held next Wednesday until the following week. Mr Peter Lawrence, the Board Secretary, said: "It was felt that the major problem would be with transport and caretakers."

However, some boards have said it would be impossible to reschedule public examinations. Mr D. J. Ramsden, secretary of the East Midlands Regional Examination Board, said: "If we had rescheduled, it would have meant pupils sitting three or four examinations on the same day. It was just impossible."

The TUC has written to all regional offices urging local Transport and General Workers' Union officials in areas where there are difficulties to advise what examination boards to ensure the pupils get to the centre.

This week the National Association of Head Teachers asked all its members to advise where there are "insuperable difficulties" to block what local education authorities to make alternative arrangements, so

that pupils could take their examinations. This could mean setting up provisional examination centres in city centres for a range of children.

Most authorities are hedging their bets over how many schools in their areas will close and it is likely most headteachers will be left to assess themselves whether to stay open or close their schools. The indications are that schools in the centres of cities are more likely to close than those in rural areas.

As far as the teachers' unions are concerned, only the National Union of Teachers is supporting the day of action but at last weekend's executive meeting only 18 of its 558 associations requested permission to stage a half-day strike next Wednesday. More, however, are expected to seek permission this week. The areas where teachers will be striking include nine London associations, Liverpool, Hull, North Warwickshire and Chichester.

NUT officials have stressed, though, that other associations will be mounting different forms of protest against the cuts. In Derbyshire, NUT members are clubbing together to buy a full-page advertisement in local papers to explain how the cuts have affected schools.

Roth the National Union of Students and the National Association of Teachers in Further and Higher Education are supporting the day of action but it is the action of the TGWU—which will bring transport to a standstill—and the National Union of Public Employees, which numbers caretakers and school meals staff among its members and is recommending all members to support the stoppage, which will have the most telling effect on education.

Because of the difficulties over transport, the TUC is concentrating its efforts on local rallies and marches. Union officials say members are likely to find it hard to travel further afield for protests.

The day of action has been condemned by the Confederation of British Unions' Teachers' Group and the Professional Association of Teachers, which is pledged never to take strike action. PAT's newly-appointed general secretary, Mr Peter Dawson, said: "I would ask the question of those who propose to withdraw their services on May 14, in what way will that benefit children? It won't and everybody knows it won't."

## Move to beat the shortage

by Bert Lodge

A one-year course to bring students without A level mathematics up to the standard of entry for a BSc maths degree will begin in autumn at the City and East London colleges.

Run jointly by the college and North London Polytechnic, the course will teach mathematics for half the curriculum with learning and communicating skills filling the remainder, other than 10 per cent of the time for options chosen from such areas as drama, sports and computer studies.

Minimum age of entry will normally be 20 with special consideration for mature applicants. Applicants should possess at least O level maths or equivalent.

"Something has to be done to break this vicious circle of not enough maths teachers producing even fewer maths teachers," Mr Sidney Jones, head of teaching studies at North London Polytechnic, said.

A meeting for applicants and anyone else interested will be held at the City and East London college on June 3 at 6.30 p.m.

An earlier alternative entry to teaching scheme run by the two colleges has been successful in that the number of places on it has been doubled.

Begin in 1977 to recruit more black students without conventional A level qualifications, the number of places goes up in September from 10 to 24. Mrs Jean Williams, senior lecturer at the City and East London college, said they were now taking white students who had not had suitable opportunities to enter teaching by the traditional route.

This course is also a one-year course and candidates must show evidence of mathematical and communication skills. On completion, students go on to the polytechnic BSc course.

Survey claims no concentration of Asians, West Indians and disadvantaged

## Mixed response to race bias report

by Bob Doe

A report on the allocation of secondary school places in Reading, Berkshire, which refutes allegations of racial discrimination has been accepted by the county's schools subcommittee but challenged by the local community relations council.

The report, drawn up by a group of local headteachers, looked at claims that black children in the town are concentrated in schools with disproportionate numbers of the less able and socially disadvantaged. The Commission for Racial Equality is carrying out its own formal investigation into the allegations.

A dispute broke out in Reading in 1978 when redrawn social priority catchment areas fed three social priority primary schools into the Alfred Sutton boys' and girls' secondary schools. After protests spearheaded by the Reading Community Relations Council, two of these priority schools were reassigned to other secondary schools and a working party of heads was set up to look into the question.

Their report, which now goes to the county's education committee, claims to show that Asian and West Indian children are not being concentrated in schools with large numbers of less able or disadvantaged whites. They looked only at children transferred in 1979, however.

On the basis of a survey carried out by the county's research unit, the headteachers found that 53 per cent (35 out of 66) Asian pupils transferred to the two, single-sex, Alfred Sutton schools last year but that West Indian pupils were not concentrated in any particular school.

Every first year pupil in the town was tested with a National Foundation for Educational Research reading, comprehension test. On

this test four of the eight secondary schools in Reading had a higher proportion of low attainers than Sutton Boys' School. Two were worse than Sutton Girls'.

The measure of social disadvantage used was the proportion of children known to be eligible for free school meals. On this basis, the Sutton schools rated fifth and joint sixth worse out of eight in the proportion of indigenous children registered for free lunches.

Mr John Sheerman, chairman of the Reading CRC and local primary headmaster, said their main criticism had been met after the protests in 1978, but he was still not happy with the report. It was "too neat and tidy".

The CRC had obtained the services of two professional researchers to look into the report. It particularly criticized the measures of attainment and deprivation used. Many Asian pupils, he said, went about the equality of opportunity issues and it would not be known whether they were eligible for free lunches. The reading test used was more about what had been achieved in primary schools than about the equality of opportunity in secondary schools.

He said the i.e.a. sponsored report was a "pre-emptive strike" to offset any criticism in the Commission for Racial Equality's report. The view was echoed unofficially by the CRC. Their report has still to be written and is not expected until the summer.

Mr Graham Williams, Berkshire's senior education officer for schools, said the report was "fairly good".

He denied any attempt to preempt the CRC report. The head's working party had kept the Com-

mission fully informed about their work.

The head's report considers an alternative "banding" scheme, such as that used by the Inner London Education Authority to ensure that children of different attainments and abilities are evenly spread. But they reject this because it would mean too much travelling for children, would break the links built between feeder primaries and their secondary schools, would seem arbitrary to parents and be inconsistent with the rest of the county.

The working party want the existing catchment areas to remain. Parental preferences in 1980 had narrowed the gap between the most and the least popular and schools now needed a period of stability to settle down.

The heads, who included Mr M. C. Smyth, head of Alfred Sutton boys' school and two members of the Reading CRC, concluded that it was of the utmost importance to avoid any proposals which could cause adverse publicity to any school.

The survey found average achievement in the eight town centre schools considerably below that of almost all the town's seven suburban schools. Even when the two grammar schools' results were added to the urban schools' average was better.

The longer the West Indian and Asian children had been in Britain, the better they did on the reading test, though those who had been here all their lives or more than six years still scored lower, on average, than indigenous children.

Scores of those registered for free meals were lower than those who were not, but the survey suggested that social background was more important to educational attainment than ethnic origin.

## Packed lunches 'cost millions and cause chaos'

by David Lister

Children who bring their own packed lunches to school are the cause of chaos, say education officials. Huge sums are being spent on staff to supervise and clear up after the packed-lunch pupils, who cannot be charged anything to offset the costs. Under the new Education Act, schools must provide facilities for the children to eat their own food.

The switch to packed lunches is also causing administrative chaos in schools, according to the National Association of Head Teachers. Mr David Hare, the union's general secretary, told THE TES this week that heads were furious that they were now forced to provide free facilities. In practice, this means schools would be littered with food packets.

To add to the cost, and the confusion is concern from the school meals organisers that this practice

leaves children bringing oddments of junk food. And one chief education officer said this week that many children brought "poison" to school which was not only of a lower nutritional standard than the school meal but which in many cases, must have cost the parents more.

Mr Ken Burgess of the National Association of Head Teachers said: "I've been talking to a lot of heads and they're all saying that while the Government is cutting the subsidies for school meals it is increasing the cost of bringing sandwiches and other packed lunches which in many cases will consist of crisps, jam rolls and other junk food."

He said that heads were looking after these children. People have to be paid to put up tables, stick up chairs, sweep up, tidy up, and then to go to the canteen to get the food. In my own school, I have to pay for the staff to supervise and clear up.

climbing up after these children will be £65,000. The cost nationally will run into millions."

She added that Lady Young, junior education minister, told her association that the children who brought their own lunches were "a nuisance". Mrs Burgess said this was hardly a practical proposition with infants and other young children.

The switch to sandwiches has been accelerated, not only by the cuts but also by the increase in school meal prices in many parts of the country.

But schools and authorities, mindful of the chaos the sandwich eaters are causing, are actively trying to discourage parents from giving their children sandwiches, though the new law forbids them from actually prohibiting it.

Mr M. L. Ridder, head of the county education officer of Warwickshire, where meal prices are set to rise to 60p in September, said: "We have always discouraged sandwiches. We try to persuade parents to eat on at the present 45p a school meal. It is a good buy."

He added that a special investigation by the county's education department had shown that some children were bringing sandwiches and other food to school. He said that the school meals were more popular than the school meal. A lot of children are suddenly bringing sandwiches because it is the only thing they can do, he said.

In Coventry, heads of primary schools are writing to parents reminding them of the value of the school meal. And in Lancashire, Mr Keith Richardson, head of Crawshaw Booth primary school, Rossendale, has written to parents pointing out that if more children bring lunches to school, school meals will have to be left off.

The National Association of Head Teachers is expected to complain to Mr Mark Carlisle, the Education Secretary, about the confusion caused by the Act which he addresses their annual conference

## Students told to apply the raspberry test

Students should train themselves to be amateur journalists to pass exams, according to Mr. Ken Burgess, education correspondent of the Daily Express. In a book called How to pass exams to be published next week, he says the best students train themselves to take accurate notes like reporters. They should work at it like sub-editors and to read the essays aloud to discover flaws in them.

He added that authorities were not approaching the problems in a consistent way. Some forbade children to bring knives, forks, plates or cups to school with their packed lunches. Others allowed children to bring drinks and "liquor" often leaked from containers on to classroom floors.

The inconsistent approach was illustrated by the action of two authorities this week. Avon's director of education, Mr Geoffrey Crump, has written to parents of primary school children saying that pupils will be banned from taking anything but water with their meals, because of the dangers of spillage if pupils bring their own drinks. And Richmond upon Thames is telling parents to bring their own lunches, but not to bring their own drinks.

Mr Burgess said this was hardly a practical proposition with infants and other young children. The switch to sandwiches has been accelerated, not only by the cuts but also by the increase in school meal prices in many parts of the country.

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## Students told to apply the raspberry test

Students should train themselves to be amateur journalists to pass exams, according to Mr. Ken Burgess, education correspondent of the Daily Express. In a book called How to pass exams to be published next week, he says the best students train themselves to take accurate notes like reporters. They should work at it like sub-editors and to read the essays aloud to discover flaws in them.

He added that authorities were not approaching the problems in a consistent way. Some forbade children to bring knives, forks, plates or cups to school with their packed lunches. Others allowed children to bring drinks and "liquor" often leaked from containers on to classroom floors.

The inconsistent approach was illustrated by the action of two authorities this week. Avon's director of education, Mr Geoffrey Crump, has written to parents of primary school children saying that pupils will be banned from taking anything but water with their meals, because of the dangers of spillage if pupils bring their own drinks. And Richmond upon Thames is telling parents to bring their own lunches, but not to bring their own drinks.

Mr Burgess said this was hardly a practical proposition with infants and other young children. The switch to sandwiches has been accelerated, not only by the cuts but also by the increase in school meal prices in many parts of the country.

But schools and authorities, mindful of the chaos the sandwich eaters are causing, are actively trying to discourage parents from giving their children sandwiches, though the new law forbids them from actually prohibiting it.

Mr M. L. Ridder, head of the county education officer of Warwickshire, where meal prices are set to rise to 60p in September, said: "We have always discouraged sandwiches. We try to persuade parents to eat on at the present 45p a school meal. It is a good buy."

He added that a special investigation by the county's education department had shown that some children were bringing sandwiches and other food to school. He said that the school meals were more popular than the school meal. A lot of children are suddenly bringing sandwiches because it is the only thing they can do, he said.

## Move to beat the shortage

by Bert Lodge

A one-year course to bring students without A level mathematics up to the standard of entry for a BSc maths degree will begin in autumn at the City and East London colleges.

Run jointly by the college and North London Polytechnic, the course will teach mathematics for half the curriculum with learning and communicating skills filling the remainder, other than 10 per cent of the time for options chosen from such areas as drama, sports and computer studies.

Minimum age of entry will normally be 20 with special consideration for mature applicants. Applicants should possess at least O level maths or equivalent.

"Something has to be done to break this vicious circle of not enough maths teachers producing even fewer maths teachers," Mr Sidney Jones, head of teaching studies at North London Polytechnic, said.

A meeting for applicants and anyone else interested will be held at the City and East London college on June 3 at 6.30 p.m.

An earlier alternative entry to teaching scheme run by the two colleges has been successful in that the number of places on it has been doubled.

Begin in 1977 to recruit more black students without conventional A level qualifications, the number of places goes up in September from 10 to 24. Mrs Jean Williams, senior lecturer at the City and East London college, said they were now taking white students who had not had suitable opportunities to enter teaching by the traditional route.

This course is also a one-year course and candidates must show evidence of mathematical and communication skills. On completion, students go on to the polytechnic BSc course.

## Maths, science standards 'not falling'

Education officers this week defended maths and science teachers against accusations in the Flinham report that these subjects are badly taught in schools.

In its response to the recently published report on the engineering profession, the Society of Education Officers states: "We should make it clear that there is little hard evidence to support the view expressed in the report that standards in mathematics and science are falling and that these subjects are badly taught."

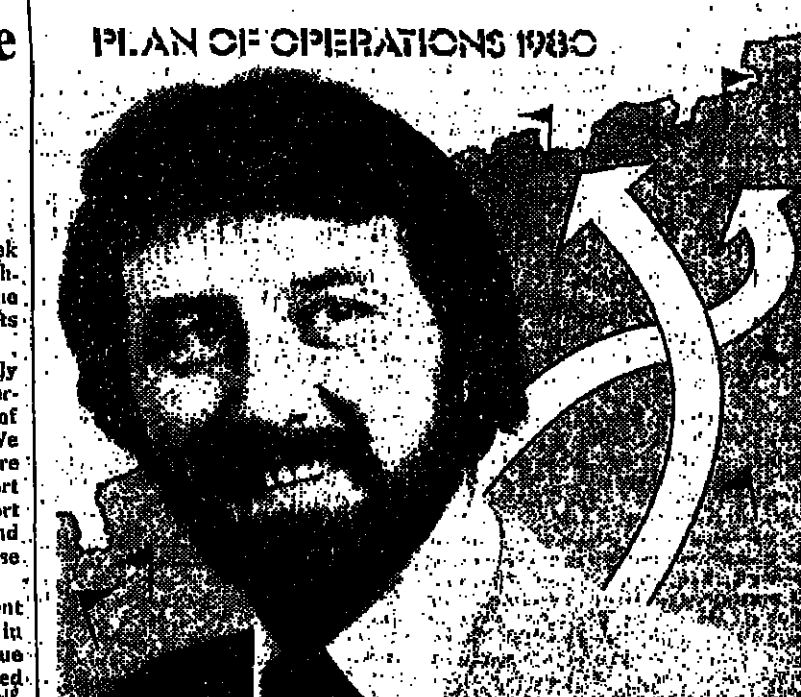
"The apparent poor achievement of some engineering students in these subjects may in fact be due rather to the fact, underlined repeatedly in the report itself, that it is often the less able student who opts for an engineering course and that this in turn stems from the limited professional and financial appeal to the more able student of a career in engineering."

The SEO also challenges the argument that early specialization in schools reduces the number of pupils eligible to become engineers. The society says: "The vast majority of opportunities already exists within schools and colleges of further education to enable potential engineers to cover the necessary basic ground."

However, the SEO adds that it does support retaining mathematics and science as a core of the school curriculum as late as possible.

## Scheme challenged

The Government's assisted places scheme should not be confined to schools with an exceptionally high academic standard, says the latest edition of *Top of the Class*, a publication of the Independent Schools Association. Those with the highest standards in other areas should also be included.



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## Need advice? Take a tip from the Barnsley classroom survival kit

by Rob Doe

Anyone who sets out to solve all the thousand and one problems faced by teachers must either be very brave or a fool. Yet that is more, in fact, what Ron Dawson, a headmaster at Barnsley, is doing in a project that, nevertheless, seems far from foolish.

With an Urban Aid grant and the backing of Barnsley Local, he is working on TIPS—teacher information packages. These, he hopes, will eventually cover every difficulty primary teachers are likely to meet from bad handwriting to children wetting their pants.

Much TIPS—and so far there are 31 of them—deals with a specific difficulty. They give teachers general background information and help to sharpen their diagnostic powers of what exactly is wrong. Then they suggest practical remedies, other sources of help and ways of judging whether the treatment is successful or not.

As well as covering learning and behavioural problems, they cover physical complaints such as poor eyesight and epilepsy (putting something between the teeth is out, apparently), and environmental factors such as poverty and home background.

No one person can possibly know everything a teacher might need to know, says Ron Dawson. And lack of time and limited local libraries often mean it is not feasible for them to research every child's problem themselves.

Not that Mr Dawson alone could research the 1,000 or so TIPS he reckons will be needed either. Most of those he has written already have been in response to difficulties already met by Barnsley teachers.

He is trying to encourage teachers themselves to write them. Psychologists in the city's child guidance service are contributing such sections as handwriting, and left handedness and Ram has turned to outside bodies for lesser known complications such as children sub-

jecting from coeliac disease who must not eat certain foods.

Reading in the Coeliac Society's information sheet that such children are often more robust than normal children will reassure teachers who know such a child is about to join their class, he says. It would also equip them better to cope with saying: "Please miss, I can't do PE. I'm coeliac."

Started in 1978, such a daunting undertaking is obviously still in its early phase. There are gaps and mistakes, Mr Dawson recognises. Trials in 22 Barnsley schools are highlighting these.

A wait on excessive calling out in class was returned straight away. Its strategy of getting such a child to keep a detailed record of the impulse to call out was aimed at the impulsive caller but quite the opposite of what was needed for the attention-seeking caller. The unit now has to be revised.

The list of other problems teachers have come across includes eating pencils—apparently a sign of dietary deficiency, beligerence, shyness, insolence, swearing and lack of bladder control.

This list reveals another difficulty with such an information bank. Some of these are already covered by TIPS but under a different name than that used by the teacher. There is a sorting and sifting section for instance.

So the card index, which is the guidebook to the bank, will have to have more cross-references added to cater for the different ways teachers see problems.

Criticisms about the brevity of the notes, that the recipes for action may just treat the symptoms and overlook fundamental causes, or that "a little knowledge is a dangerous thing," Mr Dawson acknowledges. But he thinks they are often founded on a contempt for the teacher's abilities. "Some people are surprised to learn teachers can read," he says.



Ron Dawson: "Tipster" who gathers educational "form".

The so-called experts often did not know much more about these problems than can be written on four or six sides of paper, though they rarely admitted so. Often the symptoms were the problem, or the underlying cause such as a drunken father, something beyond the teacher's ability to help.

TIPS cover far more than even several inservice training courses could and arguably relate much more directly to the particular difficulties a teacher faces.

Mr Dawson criticizes the idea that schools need screening tests to sort out their problem children. The Warnock report estimated that 20 per cent of children need special attention at some time. Mr Dawson says only about 1 per cent will get it in special education which leaves the class teacher to grapple with the other 19 per cent.

A massive programme of inservice training covering every diagnostic and treatment technique was clearly impossible. Equally impractical was a screening test that covered all educational, social, emotional and behavioural difficulties.

Most of the comments from trial schools suggest TIPS are useful, or will be when completed and polished. Large chunks of jargon hurriedly lifted from American sources in the scramble to get the project off the ground have not gone down well and various units are due for rewriting.

Some of Barnsley's educational psychologists are keen too. Children are referred to them much more and they are systematically and with more information to go on, it is claimed.

The trials schools seem enthusiastic. Mrs A. M. Rimmington, head of Ladywood First School, Grimsby, said staff were looking at it all the time even when they had no particular difficulty.

"It has not solved all our problems but many of the suggestions in it are helpful," she said. "It is not just gathering dust."

"An excellent idea" was the verdict of Mr Dennis Sims, head of Heyland Common Junior. Staff had already made considerable use of it, and it would save a lot of time when completed.

Professor H. A. Jones, Vaughan Professor of Education at Leicester University, warned that the universities would suffer from economic pressures unless they recognized that their public credibility—and therefore their claim to fund—might rest on visible external service as part of a general review of services for the unemployed. The review is largely in response to the pressure during recent months from the present employment ministers, who feel that, must be done, of improving the programmes, which are still virtually the same as when they were launched by the last Labour Government. Their view of what constitutes improvement may not, however, be shared by others involved in the programme, such as the voluntary agencies and local authorities—par-

ticularly if it includes the massive reliance on subsidising wages by the Government, which the ministers, they include a proposal to merge some projects for school leavers with schemes for young adults.

The proposals have been prepared by the Manpower Services Commission as part of a general review of services for the unemployed. The review is largely in response to the pressure during recent months from the present employment ministers, who feel that, must be done, of improving the programmes, which are still virtually the same as when they were launched by the last Labour Government. Their view of what constitutes improvement may not, however, be shared by others involved in the programme, such as the voluntary agencies and local authorities—par-

## University part-time study policy attacked

by Biddy Passmore

British universities did not take continuing education seriously, Professor A. H. Halsey, Director of Oxford University's Department of Social and Administrative Studies, said last week. Only about 2 per cent of a potential 20 million adults were being reached, he said, and the policy was "a mere 1 per cent of their total spending. Even if this were doubled, it would be 'still trivial'."

Speaking at a one-day conference on The Universities and Continuing Education sponsored jointly by the Committee of Vice-Chancellors and the Universities Council for Adult Education, Professor Halsey took issue with a number of previous speakers who had praised the universities' extra-mural record. Large chunks of jargon hurriedly lifted from American sources in the scramble to get the project off the ground have not gone down well and various units are due for rewriting.

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ticularly if it includes the massive reliance on subsidising wages by the Government, which the ministers, they include a proposal to merge some projects for school leavers with schemes for young adults.

## Science and maths crisis worsens as teachers leave and posts stay open

by Bert Lodge

More than one in four vacancies for junior maths and physics teachers are caused by the previous holders of these posts leaving the profession, a research project has discovered.

It shows the average number of applicants for a scale one physics job is much less than two and for maths about five. Yet the average number of applicants is so below par that well over one-third of posts remain unfilled because heads do not feel able to appoint any of even this small field of candidates.

As the start of a monitoring exercise on the shortage of teachers in physics and maths, Mr Bryan Chapman, lecturer at the centre for studies in science education at Leeds university, counted almost 700 maths and physics vacancies advertised in the TES from February 22 to March 14 inclusive. Questionnaires were sent to the heads responsible for the advertisements asking the reason for the vacancy, the quantity and quality of the response and what the head would do if unable to fill the post satisfactorily.

From between 400 and 500 returns he found that over 25 per cent of all scale one and two posts advertised were the result of teachers leaving. Destinations mentioned were computing, technical writing, Royal Navy, police, atomic energy authority, civil service, commerce, postal services and holy orders.

About 20 per cent of scale one and two vacancies resulted from the previous holders being promoted. This was more frequent for physics and chemistry than for maths.

Another reason was an increased demand for the subject. "This was more evident in the physical sciences than in mathematics," About 20 per cent of all scale one

and two posts are attributable to increased demand.

Mr Chapman comments: "The impression that is emerging from this monitoring exercise is certainly one of crisis. Given that since Easter the number of posts being advertised has escalated (over 25 columns of science advertisements in the TES of April 18 alone) it must be clear that the teaching of physical sciences will have to be unacceptably restricted in very many schools next year."

Asked what they would do if the science post remained unfilled, a significant number of heads said they would re-advise. "Often they feel they will have to use the carrot of a scale post even though they may remark that in any other subject the job would not merit it."

"Clearly some candidates are aware of the market forces operating and are not prepared to take scale one posts any more." Other alternatives considered by heads were redeployment of present staff, trying for an untrained graduate, sending circulars to Oxford colleges, sending sixth form physics to local FE colleges, withholding school from the first offer, reshuffling staff in order to offer a scale three, appointing a chemistry specialist to teach physics, sharing the teaching with another school or abandoning A level physics.

Although the situation regarding mathematics teachers is not so critical, heads faced with unfilled vacancies suggested they might use staff untrained in the subject below examination level or reduce the amount of mathematics taught in the school.

Mr Chapman notes that certain areas of the country, notably the south-west, seem to have no difficulty in getting suitable applicants. "Most but not all independent schools attract reasonable numbers of candidates as do

grammar schools. But even in these cases heads comment on the significant decline in applicants compared with a few years ago."

On the departure of scale one and two maths and physics teachers from the profession, heads comment: "Industry pays £1,000 a year more, has half-yearly pay reviews, offers five weeks' holiday and one day a week release, travel paid, for an MSc course. Why should we hold anyone?"

"I have lost two maths teachers to industry for higher pay."

"£200 a year increase with good promotion prospects in a job with an entry requirement of two A levels."

Moving for a salary increase of £2,000 a year with much better prospects."

Head teachers viewing this situation see only one solution to the problem, says Mr Chapman. "One principal in the independent sector commented that the market price for a good physics tutor is over £800 a year. Some means of paying 'over the odds' was suggested as the only solution to the problem by several heads. As one put it: 'Urgent action on a national scale is needed if physics and chemistry are to survive as serious subjects'."

The project is continuing to monitor advertising for maths and science vacancies in selected weeks from physics to local FE colleges, withholding school from the first offer, reshuffling staff in order to offer a scale three, appointing a chemistry specialist to teach physics, sharing the teaching with another school or abandoning A level physics.

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TUC General Secretary, Len Murray, is joined at the piano by Prunella Scales, Clive Jenkins, William Rushton, and Trevor Phillips, outgoing President of the National Union of Students.

## Introducing stars of stage, screen and national executive

The TUC dropped its Trafalgar Square image last week to declare loudly to the Government through songs and sketches as well as speeches, "We Don't Want to Work on Maggie's Farm No More."

The famous Theatre Royal in Drury Lane became the setting for a rally in defence of the arts and education in which entertainers such as George Hilly, William Rushton, John Wells and Paul Jones' Blues Band combined with such speakers as Neil Kinnock, Trevor Phillips, outgoing president of the National Union of Students, and Len Murray, general secretary of the TUC, to put across the anti-cut message.

So a speech in which Mr Kinnock attacked private education and

called for "the extermination of those institutions and influences in society which perpetuate inequalities" was followed by the Blues Band belting out the lyrics of the Bob Dylan song "We Don't Want to Work on Maggie's Farm No More" and a quip from comedian William Rushton to the effect: "I've a lot of time for Neil Kinnock—but one year as opposition spokesman and juggling at Eton is abolished."

Coinciding with the rally, the TUC opened its own exhibition at Congress House in defence of education which includes a children's arts display mounted by the National Union of Teachers and a poster and picture display on the state of nursery schools. It remains open until this evening.

## Christian unity in Wales

Catholic and Anglican in south Wales have agreed in principle to share buildings for their mutual benefit.

The Rt. Rev. Derrick Childs, Anglican Bishop of Monmouth, said this week. Mr Mulligan, Bishop of Cardiff, said the principle had been agreed in principle. The two dioceses are now in the process of negotiating the details of the agreement.

The idea is that the area around the cathedral will be developed as a centre for religious and cultural activities. The two dioceses are now in the process of negotiating the details of the agreement.

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## NUS move on register for jobless

The National Union of Students is asking its members to register for jobs.

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## London head appointed new PAT chief

A 46-year-old headmaster of a London comprehensive is to become the first general secretary of the Professional Association of Teachers.

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## Don dismissed after court case to appeal

A senior academic at Birmingham University has been dismissed because a court has found him guilty of supplying goods under a false trade description.

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## MSC ready to launch improvement plan for employment Job projects may be merged

Major changes in the programmes for the young unemployed are now being considered by Government ministers. They include a proposal to merge some projects for school leavers with schemes for young adults.

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## TES SPECIAL REPORT

Parents throughout the country are being forced to pump thousands of pounds a year into schools to pay for basic textbooks and materials that the state is increasingly failing to provide. Educational standards have been so threatened in some areas by successive spending cuts that dozens of schools have had to turn to parents and well-wishers to help pay for essential materials and services.

In some rural areas where schools are being run down several parents' groups have tried, largely unsuccessfully so far, to chip in to pay the salary of an extra teacher.

Though much of this growing parental involvement may well be illegal, some local authorities seem willing to turn a blind eye to it or even encourage it.

Several schools have asked parents, and even children, to contribute up to £10 a year towards the cost of books and equipment, and in some areas there has been growing pressure on parents to pay the full cost of "extras" such as swimming and music.

With the shortage of money for cleaning, decoration and minor renovation to schools, there has been an increase in self-help schemes under which parents, pupils, and teachers do some of the work themselves, often under the guidance of the local authority.

Though some politicians and parents have argued that this trend is educationally valuable, because it encourages parents to take a greater interest in their children's schools, many teachers are worried that schools in less prosperous areas will inevitably suffer. Many heads complain that they are already spending too much time fundraising, and there is a widespread fear that successful fundraising for basics will give local authorities an excuse to cut capital expenditure on books and equipment even further.

Parents have traditionally raised large sums for their children's schools through parent-teacher associations, but until recently the proceeds of their summer fairs, luncheons, sales and raffles went to wards providing the extra funds that the local authority could not be expected to pay for. At one time it was mini-buses or swimming pools, more recently micro-computers.

But the effect of the education cuts has radically altered the direction of much PTA activity. It is increasingly having to go on "the bread and less of the butter" of education, according to Mrs J. D. Denton of the Devonshire Education of Parents' Association. Her view is shared by many other heads of the country's PTA's.

Though there is no doubt that the education of parents is a desirable aim, it is not always clear that a slide projector or an essential others a luxury. There is no doubt that the education of parents is a desirable aim, it is not always clear that a slide projector or an essential others a luxury. There is no doubt that the education of parents is a desirable aim, it is not always clear that a slide projector or an essential others a luxury.

Parents at St Peter's Primary School, Little Hadnham, Essex, held a model railway exhibition last year to raise money for reading books and at a school in a working class area of East Angles, parents attend regular meetings, partly organized by the school caretaker. The substantial profits go into a school equipment fund, in the case they have been used to buy a computer and a vaulting box, but recently money has also had to go to books.

At another school in the area, St Bartholomew Primary School, Suffolk, the headmaster, Mr. Ted Whistler, says he is now dependent on parents help to pay for basics. This year he received £1,800 in capital, while parents provided £2,000. New geography workbooks and atlases among recent items bought by PTA funds.

He believes that the quality of education in the school has gone up directly in proportion to its spending on materials, but he is also worried that parents may spend more on expensive toys, sports gear, and this would threaten the professional autonomy of the teachers. "This is how the King of



Education Act, 1944.

61.—(1) No fees shall be charged in respect of admission to any school maintained by a local education authority, or to any county college, or in respect of the education provided in any such school or college.

Is it illegal to charge for school text books? The 1944 Education Act (see above) says so, but throughout the country bingo, fashion shows and unpaid labour are helping finance basic education. Philip Venning reports.

## Getting by with a little help from their friends



● Sixth-formers at Wyndham Comprehensive gave a fashion show to raise funds for text books, while bingo provided cash for a school in East Angles.

England lost his power. He lost the monarchy. He is probably greater than a number of schools that have declined to let parents outright to give straight contributions to buy books.

Two months ago the parent-teacher association of Weston Favell Primary School, Northampton, made a decision to let parents contribute to the school's budget. The school had a budget of £2,000, but the PTA had raised £1,000. The school headmaster, Mr. J. D. Denton, was not at all keen on the idea. He was worried that the school would be seen as a charity, and that the school's reputation would be damaged. He was also worried that the school would be seen as a charity, and that the school's reputation would be damaged.

In March parents at Tudor Grange School, Solihull, turned down an idea that parents should provide children with their own books, and voted instead to set up a special fund to supplement capital. Though parents already contribute £3 a head to the school fund, it was suggested that an extra £10 a year should go into a new special books and equipment fund. The plan still has to come into effect.

In February the PTA of St George's School, Gravesend, wrote to its 580 parents and suggested they might like to make donations of perhaps £10 a year towards the cost of books and equipment. About

450 responded, producing £3,500, most of which will be spent on text books or scientific equipment and materials. The Rev J. D. Roberts, the head, said: "I should not have to do this, but my job is to make sure the immediate needs of my children are met." In spite of his misgivings he will be repeating the appeal next year.

In his spring newsletter to all parents Mr M. E. Hutchinson, head of Frank Wheldon School, Nottingham, asked them to support a "day school fund" of £10 a head. The school had a budget of £2,000, but the PTA had raised £1,000. The school headmaster, Mr. J. D. Denton, was not at all keen on the idea. He was worried that the school would be seen as a charity, and that the school's reputation would be damaged. He was also worried that the school would be seen as a charity, and that the school's reputation would be damaged.

"I do not exaggerate when I tell you that it will be very difficult to prevent standards slipping away with these cutbacks. The new school fund cannot of course compensate for the effect of these cuts. Only a restoration of adequate funds can do that. But the fund can, I think, help to cushion the school from the worst effects."

Two of the major departments—English and mathematics—have really got enough money for their day-to-day work under present circumstances. The fund could make it possible for them to have a little more money for essential teaching materials.

At Cliffecester School, Gloucestershire, the headmaster, Mr D. A. Saunders, said that they first thought of asking sixth-formers to buy their own books (a practice that has existed in some schools for many years). But they decided this was unfair on pupils doing subjects that needed more books than others, so last September they asked all sixth-formers for a levy of £10 a head. Three quarters came up with the money, which went straight towards books and equipment for sixth form courses.

Mr Saunders said that they preferred the pupils to do this rather than their parents, to find the money. Many of them did part-time jobs and could easily afford it.

Though the school expects to repeat the levy next year, there are no plans to extend it lower down the school, where the pupils are of compulsory school age.

The head of a Nottinghamshire primary school asks all his pupils to contribute 2p a week to a school fund, apparently a common practice in some schools. Fund-raising is done on a class by class basis and is normally directed at buying a particular object such as a dictionary. "Our fund-raising is now entirely for essentials," the head said. "There is no way that capitalisation would equip a school with a new reading scheme. Recently they had spent money on an SRA kit and on class library books."

Children have traditionally raised large sums of money every year for school equipment and materials. But at one Leicestershire primary school recently the children's sponsored activities were aimed simply at raising money for the school itself.

Though the latest spending cuts have undoubtedly been disastrous for many schools, their effect has been magnified by the fact that schools have been running down for several years. Three years ago a TES inquiry into books spending revealed that even then, several schools were beginning to devote PTA funds to mainstream teaching materials.

The exact extent of the crisis depends on how generous a local authority is and how much the individual school regards as essential. There is also wide variation between schools over what routine items the parents are expected to pay for. School uniforms has always normally been bought by parents. In some places the school provides almost everything else, while in others parents may have to pay for pencils, some stationery, craft materials, sports goods, pocket calculators and geometry sets, for example. As a result of the cuts, some local authorities have either started charging

high fees for optional extras—Shropshire recently greatly increased the charge for all music tuition that is not normal class music lessons—or withdrawing things like swimming, which parents have then started paying for by various subterfuges such as running swimming clubs. The direct charging of fees by schools is illegal but parents would rather pay for the service by arguable means than lose it. Occasionally charges come closer to the mainstream of the curriculum—an A level geology student may have to pay towards a required field trip.

Another way parents are helping compensate for the cuts is in paying for, or doing themselves, minor redecoration and alterations in some schools. It was not unknown in the past for parents to put up shelves in a school library, for example, but the extent of this appears to be growing as public money runs short.

Much of this work falls within the legitimate activities of a PTA. Parents at Henley Primary School, Suffolk, recently extended the library with PTA funds and gifts of books from individual and parent from a local firm. Some authorities have long had an official policy of encouraging "self-help groups" with an agreed procedure to ensure proper standards of work. Henley Junior School, Warwick, called on parents to instal a new kiln provided by the local authority. And what plans to put up tiles had to be dropped because of the cuts, the head asked the PTA to pay for them instead.

In North Yorkshire the redecoration of two small schools was supported by the PTA, so the parents did the work. And at the Royal Grammar School, Worcester, GCE candidates spend the time after exams redecorating classrooms—the head says that their useful skills like paper hanging while doing an optional period pupils use the craft department to help mend desks and put up shelves.

More controversially, some parents, such as those at North-leaze Primary School, Avon, are reported to have gone into schools at the start of last term to spring clean. In Cheshire the National Union of Public Employees protested strongly earlier this year at what it believed were plans by the authority to encourage parents to do the same.

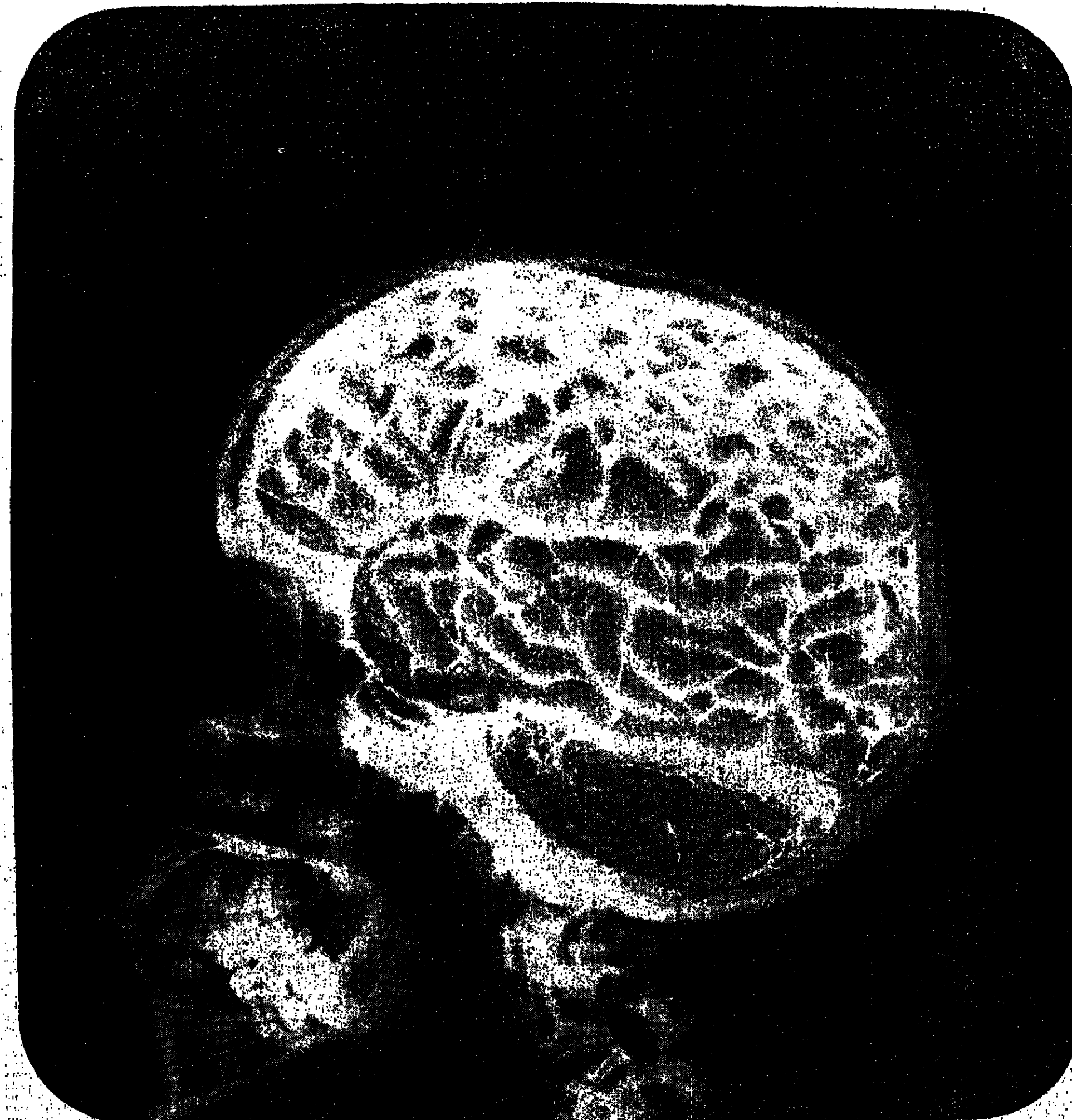
Even more controversially, in a handful of village schools faced with closure or reduced staffing, parents have proposed clubbing together to pay the salary of a janitor. The legal problems here are highly complicated and it is likely on these grounds that the proposals, such as that by the PTA of St. Wilfrid's Primary School, Ellesmere Port, have been turned down.

But parents at Farborough Primary School, West Sussex, seem to have avoided these difficulties by persuading the authority to allow a part-time teacher to work in the school as a volunteer. The parents then pay the teacher the equivalent of a teacher's salary as an "honorarium".

Better known is Lewknor School, Oxfordshire, where a teacher's salary is being paid for two years by several well-to-do parents, including Living Magistrate. In this case the local authority has accepted full employers' responsibilities for the teacher, a development that is strongly opposed by the National Union of Teachers.

The NUT has been having joint talks with the National Confederation of Parent Teachers Associations, which is worried by the trend. The National Association of Head Teachers has also warned its members to beware, but everyone admits that it is impossible to prevent parents from wanting to protect their children from the effect of cuts and heads from wanting to make up the shortfall in their capitation.

Strongest support for voluntarism has come from Mr Garry Neale, MP for North Cornwall. He became involved when parents at St. Wen's School put up an ambitious plan to help save the school from closure, which was turned down by the local authority on legal and educational grounds. In March Mr Neale successfully introduced a 10-minute rule Bill into the Commons "to make legal provision for local education authorities to accept voluntary financial aid and voluntary services". He is now pressing for a clarification of the law.



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## NEWS

Schools throughout Britain are being closed and many more face the axe. But opposition is as strong, as ever says Sandra Hempel reporting on three local campaigns.

By the end of 1979 Mr Mark Carlisle, the Education Secretary, had pronounced on 52 proposals from local education authorities to close schools. They comprised 18 rural primaries, 21 urban primaries and 13 urban secondaries. All applications were accepted except for one urban secondary and one urban primary.

Not a very promising picture for those fighting i.e.a. closure plans. Nevertheless parents, managers and staff of threatened schools continue to do battle against the arguments of falling rolls and decreasing budgets.

Leaflets that through local letter boxes, delegations head for Westminster and letters (carbon copy: editors, councillors or all) land on the desk of the minister. "Did we vote Conservative for this?" asked a recent letter from one group of jowelled parents whose local primary faces the axe. Their question seems to owe more to genuine wonderment than rhetorical style.

The Friends of North Ockendon are trying to save St Mary Magdalene Church of England Junior Mixed and Infants School in the face of some formidable opposition. Not only the London Borough of Havering, which has served a section 13 closure notice on the village school, but also the diocesan authorities, the managers and some of the parents, favour closure.

Havering decided to close St Mary Magdalene last December after the roll had fallen from 30 children in 1978 to its present 16, even the protesters agree that educational standards at the school leave something to be desired. The local and the church believe this is inevitable in a two-teacher school, and unacceptable in a London borough with good alternative schools close by.

The Friends, however, claim the school is in difficulties largely because of a lack of interest shown by the l.a. over the past two years and insist there is nothing wrong that some determination will not put right.

The protesters were encouraged by a meeting with Lady Young recently at which they received an sympathetic hearing. Nevertheless Mr. Jones, the education director, is convinced there is no case for keeping the school. He is offering the transfer to a school in Greenwich, two and a half miles away. It is an arrangement that some of the parents have already indicated they are willing to accept.

Both sides claim to have done extensive research, but their findings differ widely. Susan Wright of the Friends' committee, there will be 31 children wanting to go to school in 1981 and 41 in 1984. She says it will cost Havering £2,000 a year more for the next six years to close the school than to leave it open. This cost includes the extra payments for the buildings and upkeep and because of the cost of bussing, she says.

The l.a., however, claims that its case to house research suggests that the school will be closed after just one year. It says that the school is currently spending over £1,000 a child in staffing which is three times higher than our normal figures, Mr. Carlisle said.

The diocesan director for education for the area is Canon Patrick Appleford who has met the protesters but, in spite of the Church's concern at losing any of its school places, he is in favour of closure.

The Church is sensitive to the community's natural desire to have its village school, but we are con-



Parents, teachers and pupils protested but Falmer Church of England Primary School, Sussex, was closed three years ago.

## A fighting chance to keep the classrooms open

certified that the children are not getting the stimulus they need from different teachers and from their peer groups. We had to ask the question 'Are we running a good school?' The l.a. is convinced it can offer better provision elsewhere and we believe them. Many parents have already voted with their feet."

Havering is hoping for an answer from Mr Carlisle by the end of the school year.

Lee Brockenhurst school, near Shrewsbury in Shropshire is rather more isolated than St Mary Magdalene. Two years ago the education committee instructed its officers to carry out a survey on the impact of falling rolls with particular attention to schools which had fewer than 30 pupils or were soon likely to be in that position. As a result, a list of 14 schools was drawn up and closure recommended.

The plan for Lee Brockenhurst was to close the school to the nearest town of 10 miles away. The committee, however, rejected the plan and asked for more research and for consultation with the parents. There was an immediate outcry and the l.a. now accepts that parents and managers are firmly against the plan.

The parents are pressing for an alternative. They want Lee Brockenhurst merged with Weston Winhill school two miles away. Weston is a two-teacher village school with out-dated facilities and just under 30 pupils. The l.a. has already rejected offers of land adjacent to Lee Brockenhurst for an extension.

The education committee, however, that the minimum size for a school should be three classes with

a total of no more than 55 pupils," said Mr Philip Jones, works director of Shropshire education authority, "but they accept that in the present financial climate a more realistic number is 65 to 70 pupils." The educational officers originally considered merging the two village schools, Mr Jones said, but rejected it because it would mean a high capital expenditure which would be wasted if rolls continued to fall.

The Shropshire education committee has promised to have another look at the merger proposals and has pledged itself to full consultation with the parents. Only in two or three of the 14 proposed Shropshire closures have parents accepted the education officers' verdict.

Another file on Mr Carlisle's desk is that of the Brooke House School in Hackney. The ILA has been

reorganizing the total provision of secondary education in Hackney in the past few months. Its plan to amalgamate Brooke House boys' school with Upton House has met with general approval. What is disputed, however, is the choice of the Upton House rather than the Brooke House site for the new school. The seven-storey Upton House building is badly designed, education supervision and discipline are difficult, say its critics. They claim it is also poorly served by public transport.

The decision was taken for geographical reasons, ILA said. "If Brooke House had been used, it would have meant an over-provision in the south-east of the borough."

"Upton House is not without its faults," the ILA said, "but the bulk of secondary schools in inner

London are over four storeys." The protesters claim that only one bus passed the doors was unfair. Several buses stop around the corner just 100 yards away. ILA found this a very difficult decision to make, however, and considered the case twice. One contributory factor was that Upton House unlike Brooke House, has room for future expansion.

Ms Jenny Des Fontaine, secretary of the Friends of Brooke House Action committee, believes that the motives for choosing Upton House are more mercenary. "There are rumours that they are saving the Brooke House building in order to sell it to a voluntary-aided school. It is much more attractive and marketable than Upton House."

This said ILA is completely untrue. "We have not made a decision yet about the Brooke House site but we usually try to find an educational use of our own in these cases. If not we offer it to the local authority."

The closing date for objections was the end of March and both sides are hoping for a ministerial decision during the summer.



When Madingley Church of England primary school in Cambridgeshire was to close in 1978, a campaign to buy it attracted a private benefactor. The school is now run by parents.

## NEWS

## Sociologists see wider class differences as more graduates turn to teaching

by Bert Lodge

The origins of teachers coming into the profession in the last few years have widened the gap between the working class child and the middle class teacher, sociologists from Sheffield University have found.

While in the 1960s, the years of expansion, the number of student teachers coming from working class homes increased, the proportion from manual workers' families compared with the rest of the recruitment fell by about a fifth.

"It may be hoped that the move towards an all-graduate profession and the cuts in college of education places will not exacerbate this educational and socially divisive trend," write Mr Trevor Noble and Miss Bridget Pym in the new issue of the *British Journal of Sociology*.

They point out that in 1961 no more than 21,000 students qualified as teachers. In 1973 the output was 49,000.

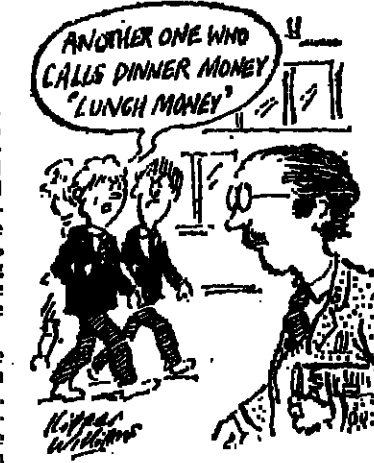
In 1945 they say, the proportion of men entering teaching whose father had been a manual worker was 43.3 per cent of those going into elementary schools and 31.7 per cent of those going into grammar schools. "We can assume that the divisions approximately correspond to non-graduate and graduate teachers then by 1961 the proportion had increased to 47 per cent

of non-graduate men and to 39.2 per cent for graduates."

For women 37.8 per cent of new elementary school teachers and only 19.9 per cent of grammar school teachers were from working-class homes in 1945. By 1961 the respective figures were 38 per cent and 26.8 per cent. "Thus, for men and women entering secondary selective and primary and unselective school teaching, the evidence is broadly of a very slight widening social basis of recruitment in the years up to the beginning of the 1960s."

The researchers looked at trainee teachers from a local education authority area in South Yorkshire. They found that by 1974 the position had changed. Allowing for the large proportion of working class in that area, they calculated 56.5 per cent of college student teachers would come from working class homes. In fact by 1974 only 45.6 per cent were working class.

"This was due to the very substantial decline in the proportion from the skilled working class. This was only 29.6 per cent compared with the expected figure of 46.4 per cent in 1961. At the same time the researchers conclude that the proportions coming from semi-skilled and unskilled work families had increased from an expected 8.2



and 1.9 per cent respectively to actual figures of 13.6 and 3.0 per cent.

However, "the proportion from manual working class homes among graduate teachers appears to have remained static since 1961."

Yet "graduate trainees as a group are more middle class and they are an increasing proportion of teachers. Taken together these tendencies sustain the suspicion that the teaching profession may be assuming an even more middle class complexion."

## Fresh milk saves £75,000

Avon schoolchildren will soon be doing their bit for British farmers and the dairy industry by consuming one million gallons of fresh milk a year as a courtesy of the school meals service.

The county claims to be the first to switch completely from using dried to fresh milk in all its school catering. It says that fresh milk is more cost effective, thanks to the RRC subsidy: the reduction in the milk bill is estimated at more than £75,000 a year; it is nutritionally superior to dried; it tastes better and it reduces waste.

The decision follows a year's trial when all aspects of the move were investigated. Initially, one school switched over and, by the end, one sixth of the county's schools were using fresh milk.

## Euro-school open for business

A new, trilingual business education course will be available in London from October.

The independently financed European Business School, which has branches in Frankfurt and Paris, launched its British outpost this week. The school, based in London's City University, will take about 15 students in its first year; fees are £1,100 a year and the course lasts four years.

The diploma will at first be validated only by its sister organisations, but eventually it is hoped that either the Council for National Academic Awards or a university will give it formal recognition.

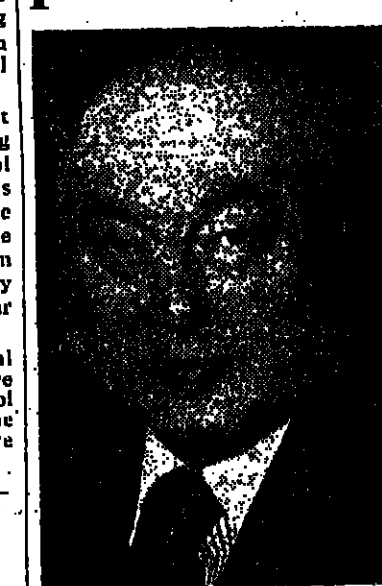
## Dury focus on young homeless

Shelter, with the help of rock singer Ian Dury, is running a competition for secondary school pupils to introduce them to the increasing problem of homelessness and poor housing for young people.

The competition, designed for all ability levels, contains a cartoon, a poem, a story, a play, a song, a letter and a record, and a special award for the school that submits most entries.

Details from Clary Salisbury, Shelter, 57 Watlington Road, London SE1 8UQ. The entry fee is three 12p stamps and they should be in by May 31.

## Report slams refusal to publish exam results



Dr Rhodes Boyson

The National Council for Educational Standards, whose supporters include Dr Rhodes Boyson, junior education minister, last week condemned local authorities which refuse to publish school examination results.

They said in a report, which has a preface by Dr Boyson, that "it has been official policy to withhold examination results of individual schools, thus making it impossible to evaluate the results of educational

policies."

"This is worrying," the report says, "because when a few results have been known, they show wide divergences between different schools."

The authors, Mrs Caroline Cox, director of the Nursing Education Research Council at Chelsea College, London University, and Mr John Marks, senior lecturer in physics at North London polytechnic, use Manchester as an example. Their report says: "In 1978 the failure rate at A level was 50 per cent or more for the 13 of the 24 Manchester comprehensive schools who entered candidates for A level. In these 13 schools pupils entered just over 700 A level exams and failed in just over 400 of them. Over all the Manchester comprehensives, there were 44 A level courses to which nobody passed and 74 in which only one person passed."

The authors conclude: "Failure on this scale—with all the costs of falsely raised expectations for the pupils involved—seems to us to indicate that many of these sixth forms are little more than cruel confidence tricks for many of their pupils."

The new Education Act does require local authorities to publish information each year on individual schools. This information will include external exam results, but this part of the Act will not be binding until regulations are published following consultations with the local authorities. The regulations are unlikely to be published by the next school year.

## Campaign tells of Soviet Jewish students' persecution

"Competing for Freedom" is a campaign using the Moscow Olympics to highlight the oppression of Jewish students in the Soviet Union, has been launched jointly by the Union of Jewish Students and the Student and Academic Campaign for Soviet Jewry.

Universities and colleges will stage events prior to the Olympics to support the campaign. A list of college campuses will explain the problems.

The campaign is to take place throughout Western Europe. Last weekend, more than 50 student representatives from nine European

countries met in Amsterdam to coordinate action.

Mr David Aaronovitch, President of the National Union of Students, has urged British students to support the campaign. In an open letter to NUS members, he says: "We must draw the attention of the world to the fact that while athletes will be competing for medals in Moscow Olympic stadiums, some of our fellow students will be competing for freedom. Many Soviet Jewish students face harassment and persecution as a direct result of their faith or pursuing their culture, or emigrate; and the situation is deteriorating rapidly."

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THE TIMES  
EDUCATIONAL  
SUPPLEMENT



## Protests and strikes bring disruption to all levels

by Jane Jessel

PARIS — Strikes by teachers and school ancillary workers, and violent student protests, have combined to cause disruption throughout the French education system in recent weeks.

Parents have also gone on strike, refusing to send their children to school.

The teachers' strikes are part of a continuing protest against pay and working conditions. They were called by the *Fédération de l'Éducation Nationale* (FEN), a left-wing teacher union umbrella group, as a demonstration against the curbing of the education budget, the closure of school classes (due, the Government says, to falling rolls) and a loss of teachers' jobs (TES, March 14). It was also a protest against a deadline in pay negotiations and the restructuring of the school holidays (TES, January 11).

It was the first time since the upheavals of 1968 that all sectors have acted jointly.

M. André Henry, general secretary of FEN, commented on the strike with the Government to "throwing oneself against a wall of obstinacy". When negotiation failed, he said, unions had to turn to their ultimate weapon.

The Government, however, remains intransigent, blaming teachers' attitudes rather than policies for the general discontent in education.

M. Christian Deuille, the Education Minister, said that the care and attention teachers gave to children were more important than the size of classes in which they worked.

M. Raymond Barre, the Prime Minister, denied Government complicity and laxity, and denounced movements inspired by other considerations than safeguarding the educational system.

Meanwhile, student protests at Paris, Caen and Grenoble against new measures being introduced to reduce the number of foreign students erupted into violence when police tried to evict students occupying university buildings. At Lyon, overseas students began a hunger strike in protest against a new French language examination foreign students are now supposed to take.

Student protests were expected to escalate this week with a proposed "national day of action".



Teachers: continuing protests

Ten thousand machines by 1986? Jane Jessel

## French press on with classroom computers

PARIS — The French Government is carrying out the first stage of an ambitious programme to introduce micro-computers into French upper secondary schools. During the current school year it is planned to install more than 400 computers in about 140 lycées as part of a project which will provide 10,000 machines by 1986.

The French, who feared they were falling behind in the technological age during the 1960s, have been making up for lost time during the past decade with an enthusiasm which sometimes seems to have turned the country's administration into one vast data bank.

Practically every sector of everyday life now seems to be computer-controlled. For example, the government will begin next year to phase out telephone directories and replace them with computer terminals in subscribers' homes and offices.

Telephone alarm calls are already available automatically in some places, simply by dialling into the system the subscriber's telephone number and the time the call is required.

In keeping with this rapid technological development, the Government took a decision in 1978 to

introduce computer-assisted teaching for 15 to 18-year-olds. A pilot scheme, under the direction of the *Institut National de Recherches Pédagogiques* began in 1972 when 58 lycées, out of a total of 1,200, were equipped with micro-computers. Following the success of this experiment the Ministries of Education and Industry are jointly extending the project with the so-called *Operation 10,000 micro-ordinateurs*.

The programme is a logical development of the expansion of technological education introduced by M. René Haby, Minister of Education in 1977. It will provide students with a basic understanding of computers and data processing, but is not seen as much as a new subject in itself than as a means of transmitting information in all subjects as the participation of the Ministry of Industry might suggest. It is also expected to provide some stimulus to the French computer industry.

During the 1972-6 pilot scheme, the 58 lycées were equipped with micro-computers, which had a central unit and a minimum of eight terminals. The 500 or so terminals were used on average 20 hours a week. By the end of the experiment more than 400 programmes had been produced, covering the whole range of subjects: mathematics, sciences, languages, literature and arts. A basic computer language was specially devised, based on French vocabulary.

In spite of the experimental nature of the scheme, its users considered that 70 per cent of the material was "good to excellent". A Ministry of Education report attributed this satisfactory result to high teacher motivation.

About 500 teachers were given full-time training for the scheme, and a further 5,000 took correspondence courses. Teacher training accounted for about half the cost of the project, the cost of which was estimated at £10m.

The other half was approximately split between equipment and

## The nation that prays together in school finds itself in court

by Clive Cookson

WASHINGTON — New attempts are being made across the United States to introduce organized religion into public education, despite the clear statement of the First Amendment to the American Constitution that church and state should be separate. Every week courts across the country are being asked to stop schools violating the constitution.

Over the past week, which has not been atypical, the following cases have been in the news:

● The United States District Court for Northern New York ruled unconstitutional an attempt by a group of pupils to organize prayer meetings in their secondary schools before morning classes. Their lawyer said they just wanted to pray: "Good morning, God, help me make it through the day."

● The United States Eighth Circuit Court of Appeals decided two to one that schools in Sioux Falls, South Dakota, could observe religious holidays approved by an interdenominational committee, including Christmas and Jewish holidays.

● The Kentucky Supreme Court split three to three on the constitutionality of a state law allowing the Ten Commandments to be posted on public school walls, if the posters are paid for privately.

The year's biggest school prayer case so far concerned a new law passed by the Massachusetts legislature, which required teachers to hold a short daily prayer period in their classes and invite participation by pupils. As schools took effect, in February, groups such as the American Civil Liberties Union, the American Jewish Congress and Madalyn Murray O'Hair's Society of Separationists took legal action. And six weeks later the Massachusetts Supreme Court duly

Middle East

## Cash crisis hits refugee programme

Schools for Palestinian children in Jordan and Syria may close this summer. The consequences could be 'disastrous'.

By Christopher Walker

AMMAN — The education of several hundred thousand Palestinian refugee children is threatened by a serious new financial crisis which has hit the United Nations agency responsible for providing them with basic services.

Last month, the United Nations Relief and Works Agency (UNRWA) handed a formal ultimatum to the Syrian and Jordanian governments warning that all its schools in the two countries would have to be shut down by August if the emergency funds are not made available to meet the agency's deficit of \$57,000,000. The schools provide education for an estimated 178,000 Palestinian children aged between six and 15. Many are situated in sprawling refugee camps which still scar the Middle East, and UN officials are seriously worried about the social consequences which could result from the shutdown.

Already the Jordanian Government, whose economy depends heavily on foreign grants, has indicated unofficially that it will be unable to take over the schools. A similar response is feared from Syria where the administration of President Assad is coping with widespread internal unrest.

"The crisis is the most serious we have faced in our 30 years of helping displaced Palestinians," Mr John Tanner, the British-born director in charge of UNRWA's operations in Jordan, said. Jordan accounts for 10 per cent of the 1,900,000 registered Palestinian refugees.

Originally founded on a temporary basis in December 1949, UNRWA now claims with some justification to administer a unique educational system in its five fields of operation: Syria, Jordan,

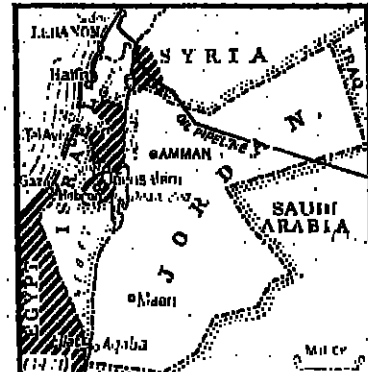
Lebanon and the Israeli-occupied West Bank and Gaza Strip territories.

Using mostly qualified Palestinian teachers, the system employs four different sets of text books (Gaza is still under the educational auspices of Egypt) and mirrors the education of the host country. This makes it possible for Palestinian children to further their education in upper secondary schools and universities and to take the state examinations of the countries involved.

Ironically, the agency's financial crisis is largely the result of a sudden, unexplained cutback in funding by the rich Arab oil producers—who have always been reluctant to provide money for relief work among the Palestinians. "They claim that they did not create the problem of Israel, so it is not their responsibility to clear up the mess," Mr Tanner said.

Because UNRWA's task was considered by the international community to be only temporary when it was first set up after the creation of the state of Israel, its funding has always been on a voluntary basis. Frequent attempts to secure regular official funds from the United Nations have failed because of the opposition of most member states.

The threatened total cutback in schooling in Jordan and Syria has been decided on rather than more



Palestinian children in a refugee camp near Amman (below). And the area of UNRWA's operations (right).



## Move to give migrant children citizenship provokes outcry

by David Dungworth

West Germany — The Federal Government is making it easier for the children of immigrant workers to become West German citizens.

It is proposing to allow those who have been resident in the Federal Republic for a minimum of six years to apply for citizenship, provided they do so before their twenty-first birthday and also give up their previous nationality.

In addition, all young foreigners are to be given the right to apply for work permits without fulfilling the waiting times currently in force.

Other features of a wide-ranging programme approved by Chancellor Helmut Schmidt's Cabinet include: intensive German language courses for immigrant school children and a comprehensive advisory service on social matters, vocational education and employment outlets.

The Federal Ministry for Education and Science is also to sponsor a series of research projects designed to investigate ways of promoting contact between kindergartens, schools and foreign parents.

Although it is estimated that the cost of adopting these measures will run up to \$1.68m (about £150m), the Federal Government believes that they are necessary to provide equal opportunities for foreign teenagers and prevent the growth of an army of dissatisfied young second class citizens living in overcrowded city ghettos.

West Germany now has 1.4 million immigrants under 18, almost one in 10 of the total age group. About half of them were born in the Federal Republic.

Many attend school only irregularly or not at all, especially the girls who frequently return to look after younger siblings or help in the home.

Each year 45,000 immigrants

## Day centres closed by labour disputes

by Chris Mosey

STOCKHOLM — Swedish day-care centres and schools have been hit by the wave of industrial unrest that has brought the nation to its worst labour relations crisis since the 1969 general strike.

Child-minded and preschool teachers in the Solna area of Stockholm, joined a strike of 14,000 public sector workers, which halted all air traffic into or out of Sweden, disrupted shipping, closed the Stockholm underground, and led to delays and cancellations on trains and buses.

All educational radio was halted and school programmes on television were blanked out by the strike.

Several classes had to be cancelled in schools around the country when teachers failed to arrive because of transport problems.

Only the Solna day-care centres were officially on strike, but others joined in unofficially as staff took the opportunity to protest against low pay and under-staffing.

Parents were forced to stay at home or take their children to their work places.

But Mr Donald Monvall of Stockholm social services said that in many day-care centres staff were having to work overtime despite an official union ban.

A lot of parents are having trouble getting to the centres to collect their children, he said. "Staff have to stay behind looking after the children until their parents get there."

## More jobs for young workers

by Bill Purvis

SYDNEY — There has been a significant drop in the number of unemployed young people in Australia, but the opposition Labour Party claims it will create even more jobs over the next few years after the federal election later this year.

The latest unemployment figures show that the total unemployed has dropped 34,000 from the previous month to just over 340,000.

This is the biggest monthly fall for two years. Nearly half the decrease was due to school-leavers finding work. The number of 15 to 19-year-olds looking for their first job fell from 72,500 to 57,200.

The Government claims that its sound economic management over the past few years has been the reason for the reduction in the national unemployment figure to 6.1 per cent of the labour force.

The Labour Party, however, claims that the level of white-collar unemployment is still high, at 10.5 per cent, and that the Government is not doing enough to create jobs for young people.

In an important statement on employment policy the party's federal leader, Mr Bill Hayden, and its employment spokesman, Mick Young, have unveiled a plan for 100,000 people, half of whom would be aged 16 to 24.

The plan comprises:

- The establishment of a community service corps to create 50,000 jobs for young people.
- A work programme to create 20,000 jobs for adults with dependent children.
- A wage-cost subsidy of 30 per cent for employers who take on, in addition to their normal intake, any person unemployed for three of the previous 12 months.
- A plan to scale down the number of skilled immigrants and to boost the number of apprentices in the Australian industry by 20,000 a year.
- In addition, a Labour government will set up a manpower office entrusted with developing a comprehensive manpower policy.

The net cost of the party's proposals is estimated at A\$180m (£90m) in the first year and around A\$350m in later years.

## Primary staff call for a 24-hour week

COPENHAGEN — A recent two-day extraordinary congress of 200 delegates of the Danish Union of Teachers (DUT) has ended here with a call for negotiations with the Ministries of Education and Finance on a reduction of primary school teachers' hours.

The DUT, which wants primary school teachers' actual class hours reduced from the current 27 per cent to 24 per cent, has challenged the Ministry of Education to a vote which will decide the average total working week of Danish primary school teachers at 27 hours and minutes out that more than a 10 per cent reduction in teaching hours is possible.

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## LETTERS

## The nursery exam board at work: a different view—from the inside

Sir,—The National Nursery Examination Board's full-time staff are described by Helen Penn ("Reconciling the differences", *The TES* April 4) as "skeletal small"—a phrase which conjures up for me a rather appalling vision of a band of emaciated pygmies. As headmaster of this anthropological curiosity, may I say that I think it a pity that this generally sensible plea for greater rationalization in the provision of services to young children should have been marred by four factual inaccuracies in so far as the work of this board is concerned:

(1) The board is in fact not a "self-selected, self-perpetuating committee without any statutory representation either from government or unions" but is composed of representatives nominated annually by 25 bodies with a major interest in services to young children and in training.

I am surprised that Miss Penn is unaware that among these bodies are no fewer than four trade unions (it could be argued that bodies nominating representatives are not the right ones or that trade union representation is insufficient and this is one of the matters to which

the panel of inquiry commissioned by the board will be addressing its attention).

Equally, I am surprised that Miss Penn is unaware that the board's constitution requires the appointment of assessors from both DES and NUTSS.

(2) Miss Penn is misled in thinking that "The courses vary enormously, since the board exercises its control chiefly by setting the final examination". In fact, the board acts not only as an examining body, but also as a validating body. Courses may only be established after approval of a detailed submission as to the content of the course proposed and the resources to be provided. Courses are periodically monitored by staff employed by the board.

(3) With regard to the equivalence to the board's certificate, the situation is rather different than that which Miss Penn describes, for good or for ill. Rather than having "never recognized the status of the certificate" the situation is that the equivalence of the certificate has never been negotiated at all. All one can say with certainty at this point in time is that in terms of Burnham grading the course is post O level and that therefore the idea that it is "academically worth one O level" would not be tenable on common sense grounds.

Clearly the present situation cannot be allowed to persist and the board have in fact accepted negotiation on this matter as a priority issue and hope that recommendations on this subject will emerge from the work of the inquiry panel.

(4) Finally, I find it difficult to understand why Miss Penn feels that the board "has shown itself extremely sensitive to any new proposals". In fact the London Nursery Campaign is one of the many bodies which has been invited to submit evidence to the panel of inquiry, and it is the board's hope that they will do so. Certainly the board will only regard the work of the inquiry panel as being justified if the widest possible spectrum of interested organizations do contribute to its conclusions. Perhaps I might take this opportunity of drawing to the attention of your readers that the chairman of the panel, Mr J. D. Brierly (who can be contacted at this address), will be interested to receive submissions from any interested individual or organization whether or not they have received a specific invitation to contribute.

MICHAEL A. STANTON,  
Chief Executive Officer,  
The National Nursery Examination Board,  
Argyle House, 29-31 Euston Road,  
London.

## The ligatures and options of Britain's different cultures

Sir, During a recent discussion on the radio (April 21) between the social scientists Professor A. H. Halsey of Oxford and Professor Ralf Dahrendorf of the London School of Economics concerning liberty and equality, I was interested to hear Dahrendorf present his view that in the demand for liberty, education should not be so much concerned with documentation as with the pursuit of interests and desires. He spoke of how education in contemporary society offers more options to the individual but stressed the insignificance of such options without the presence of bonds and links for "ligatures" as he called them, and he commented on the work of some institutions where the need for "meaning" had been recognized and channeled.

I would contribute this increase in awareness to the other members of the course (lecturers and students) who were drawn from various cultural and educational backgrounds; the widely differing attitudes and ideas of such a mixture led to lively, if not heated, discussion which was an education in itself. Also the nature of the course work which included some personal research was an additional eye-opener.

In retrospect, I would view the year as a representative activity rather than "another academic discipline" which may no longer be required to exist once the fundamental need in education for the retention of ligatures as well as the need for options has been realized, accepted and put into practice in our multicultural society.

My doubts proved to be unfounded. By the end of the year I had not only expanded my knowledge of the different cultures that exist in Britain today, and their

need for "ligatures" as well as "options", but also gained insight into the place of education in the greater socio-political sphere and how the demand for so-called "progress" and "equality" among the indigenous population had led to their serious mis-education (my term).

Being one of the mis-educated, I was at times alarmed to discover that, in spite of holding what I believed to be fairly radical views, I was nevertheless still in possession of some racist attitudes of which I was unaware until they were made apparent to me. Perhaps it was this greater awareness of myself which proved to be the most fundamental outcome of the year.

I must confess to having approached the course somewhat sceptically, having completed eight fairly disillusioned years as a primary teacher and doubtful of how something which I believed to be a basic principle of education could be presented as "another academic discipline"—still, I was clutching at straws.

W. H. INGLIS,  
Wargrave, Wokingham,  
Wimbledon, London SW19

## Wrongs to blacks come to light

Sir,—I would like to take this opportunity to thank you and your correspondents, Bert Lodge for the article, "Black school-leavers" (*The TES* April 11), and Mr Hassan for the only loser in the country and Walsall is not the only culpable education authority in the realm.

As the Convenor of the Society of Immigrant Teachers I have been

coming across so many cases of alleged injustices on black teachers in the past five years of our society's existence. Only recently a section of the press is waking up to acknowledge the reality at the situation, SAMSUL ALAM, Schoolmaster Fellow, Fitzwilliam College, Cambridge.

## Out of tune with dyslexia

Sir,—May I also take issue with Audrey Wisbey in connection with the recent Wisbey/Dombey controversy about dyslexia, ("Wrong on cue", April 11).

A research project carried out by Sandhya Naidoo in 1972 at the JCAA Word Blind Centre for Dyslexic Children, showed that whereas there is a small number of visual dyslexics, in the large majority of cases the disability is linguistically based.

Some current research suggests that one of the main problems in the area of retrieval, short-term memory, and verbal labelling, are characteristic of language disorder, rather than discrimination as Wisbey claims. All this is borne out by twenty-five years of experience at the John Horniman School with language disordered children where, as a whole, the school population are poor readers (although they were not selected for this reason), many exhibiting marked dyslexic symptoms, and there is usually a hard core who would be regarded as dyslexic in any country.

Successful methods of remediation have been multimodal with emphasis on the kinaesthetic as a link, and phonics. A neurologically unrelated medium such as music cannot sing in tune. My director of music maintains that all children can sing in tune, unless they have a relevant physical handicap, and if Mrs Dombey would care to move to the City of London and send her daughter there we will prove it by having her performing at Covent Garden in three years time. Unless, of course, the little girl remains incorrigibly convinced she has something better to do—which seems to be the other major reason for "dyslexia".

A. R. TOMKINS,  
Headmaster,  
St Clement Danes School,  
Charles Road,  
Chorleywood,  
Herts.

As a corollary, our experience with partially hearing/deaf children indicates that in spite of hearing loss they are on the whole better readers, disregarding the problems of comprehension, than the children with expressive language disorders which group appear under dyslexia, and it is interesting that the only child in the school ever to have demonstrated perfect pitch was visually hearing.

In view of the fact that that dyslexia is usually a fundamentally linguistic disability, it is difficult to refute the argument that the remedy should be similarly based. This being so, it is not easy to see where musical training helps.

MARY PALMER,  
Former Head of John Horniman School, Wokingham.

Sir,—Miss Dombey backs her way through the murky jungle of dyslexia, but then, immediately after suggesting that many instances of this mysterious disease are really examples of sheer bad teaching, she points it all by giving up her daughter to a musical dyslexia (she cannot sing in tune). My director of music maintains that all children can sing in tune, unless they have a relevant physical handicap, and if Mrs Dombey would care to move to the City of London and send her daughter there we will prove it by having her performing at Covent Garden in three years time. Unless, of course, the little girl remains incorrigibly convinced she has something better to do—which seems to be the other major reason for "dyslexia".

A. R. TOMKINS,  
Headmaster,  
St Clement Danes School,  
Charles Road,  
Chorleywood,  
Herts.

## Worthwhile but not the easiest

Sir,—No doubt you gave Mrs Penn Blackie so much space because her position is provocatively extreme. ("Glad to be out of it all", April 25); provocatively so, one might say, considering that she gives up teaching after what sounds like a good career. When she looks back on the years of child-bearing and rearing, she may find that they too had their elements of mundane boring grind. What occupation has not?

I am myself approaching retirement after teaching most of my life with a break of 12 years to bring four children to school age. I can remember no time, since 1943 or so, when there were not gaining problems of some sort, but equally no time when there was so much nothing. And yet teaching is freer in method and content than ever before. Books are brighter, more approachable, less hidebound, children less servile, teachers more professional, buildings more cheerful, higher education more accessible.

I take it teachers are not in the job because they think it will be easy, or easier than other jobs. Reports are terrible, duties are terrible, record cards a pain. Much of the exercises can be terrible for kids too. But somehow it is worth while. It is just and the lesson, starts, is a day?

NANCY BOWEN,  
King Alfred's School,  
Wantage,  
Oxon.

## LETTERS

## Race bias remarks misquoted

Sir,—I was concerned to read that leaders of black groups had been "misquoted" and applied by the "misquoting" and "discriminatory" nature of evidence from The National Association of Head Teachers to the Rampton Committee (April 25). To avoid any further misunderstanding let me state quite clearly that the remarks made in our submission as quoted in your report have been taken out of context. During the compilation of our evidence we were well aware that we ran a risk of this happening and, therefore, we are not surprised at some of the reactions, but we are saddened by them.

I have now reached the stage when we are no longer able to recognize that such a complex subject as pupil attainment cannot be

dealt with in one sentence. Our submission opened with the words: "The National Association of Head Teachers welcomes the opportunity to provide information on this subject and, in some measure, to rectify the adverse publicity given to West Indian youth in the news media". It was in such a spirit that the work of the committee was undertaken. I invite any interested organizations to ask for a copy of our evidence so that they can read the whole story for themselves.

I submit it will be a sad day for this country if genuinely complimentary remarks made when considering the contribution individual pupils may be able to make to the ethos of a school, are to be swept aside, unchecked, by the criticism that such talk is patronizing. Anybody reading our entire submission

will recognize that we make no basic assumptions with regard to West Indian pupils beyond the fact that they are individuals who need to be treated as such.

I conclude with the following quote from our evidence: "The statements made are qualified because The National Association of Head Teachers is very conscious that pupils are not, in reality, members of ethnic minorities but individuals. No two West Indian children are any more alike than two English children. Classification into racial groups can be counterproductive in that it tends to produce generalizations which can lead to a failure to identify the needs of individuals."

D. M. HART,  
General Secretary, National Association of Head Teachers.

## Towards a true multicultural society

Sir,—Whatever does the National Association of Head Teachers, in its evidence to the Rampton Committee (as reported in your issue of April 25), think it is doing? As a senior teacher in a comprehensive school I regret deeply the views expressed in the N.A.H.T. may be representative of many teachers, but that such views should be supported by the association is irreprehensible. Rampton needs not the reinforcement of stereotypes but constructive suggestions for their remedy.

Does the production of one black star athlete counterbalance the encouragement of thousands of alienated black school-leavers? For the N.A.H.T. to pronounce that "rhythm, colour and athletic prowess" counterbalance any deficiency is nonsense. Does a natural sense of rhythm, colour and athletic prowess get a black school-leaver a job and thus a sense of security and responsibility in our society?

May I ask N.A.H.T. members: choose your opinions with care. Try to learn how racist indeed is our society and then try to initiate the remedies. Take a couple of bold steps and you will be the same. . . . into genuine understanding, respect and esteem of the

origins, feelings and aspirations of black pupils, and then perhaps we can begin to approach a true multicultural education in this country.

Make no mistake; this is no intellectual exercise merely to appease a few vocal black leaders. If we do not possess very soon a curriculum which reflects such a progress in attitudes and their practice, we may suffer a severe devaluation of our society. It is not a curriculum which could inflict great harm to our society.

But we should not feel only a need to respond to such a threat. Will you, N.A.H.T. members, continue with all the naive self-confidence? Can you still lead your teachers and our society into the only future of which we can be proud—a multicultural Britain of fair and equal opportunity for each and every school-leaver?

GEOFFREY BURELL,  
Gravelly Road,  
Moseley,  
Birmingham.

## Yardstick for technicians

Sir,—The Technician Education Council was established in 1973 to rationalize the provision of technical education for all persons in technical or equivalent occupations in England, Wales and Northern Ireland. This has meant the phasing out and replacement of all existing National Certificate/Diploma courses in this area of work along with the City and Guilds technician courses. Although this rationalization process is not yet complete, TEC now has over 2,000 programmes in operation and something in the order of 140,000 students studying; these new

programmes are being carried out by the colleges according to an assessment plan validated and approved by TEC. The implementation of the programmes of study, however, the assessment of students is, overseas, by TEC's external moderators. Although still in the process of the standard of its awards is the exercise of responsibility by colleges and lecturing staff, TEC has recently considered the desirability and need

for some form of moderating instrument. Such an instrument could effectively provide a "yardstick" against which the performance of students in certain programmes or groups of programmes might be made.

Although some work on moderating instruments has been carried out in this country, there are no results which are immediately usable within TEC programmes. Because of this TEC has decided to fund a research project, the aim of which is to investigate ways of how TEC might establish, introduce, evaluate and operate, moderating instruments within the full spectrum of its awards.

The purpose of this letter is to apprise your readers of our intention to ask any organization such as university and polytechnic departments, educational bodies or similar organizations interested in tendering for this project to contact me. I will be pleased to provide further details.

FRANK RIDGON,  
Deputy Chief Officer,  
Technician Education Council,  
76 Portland Place,  
London W1N 3AA.

## A Euro-course mystery

Sir,—In June 1979, when attending a short course organized by the DES I was interested to note the presence of several teachers from various European countries who told me that they were on Council of Europe Awards. The H.M.s who were present were unable to give me any details about these awards and, in October, wrote to the DES asking for information. Unfortunately I received no reply.

When this year's booklet of short courses arrived at our Teachers' Centre I was interested to see the Council of Europe awards published and, within a few days, the booklet. Shortly afterwards I received booklets a "ing details" of courses in Germany, Switzerland, Holland, Belgium and Portugal, several of which I found very interesting. It was a pity that, however, since nearly all the courses on offer had either already

taken place or the last day for application had passed.

These awards are made available to ordinary teachers, and not to those who already have the opportunity to go to other countries, to enable them to gain some experience of other European education systems and exchange views with practising teachers from these countries. I should like to know what has happened to the places made available for English teachers. Have they gone by default? If teachers have attended how did they get the information? I am actually involved in special education but, since I speak fluent French, German and Spanish, I should have had no difficulty in following a course in any of these languages.

EDWARD TIBURTHUS,  
Broadstairs,  
Kent.

## Why pay time lag could leave Clegg on the shelf

Sir,—I note with some concern the news that, in response to the employers' offer of only 10 per cent, for there is a great danger that, because of the convoluted nature of the conditions of service, a most important fact may pass unobserved. It is that, if the teaching profession settles now for less than the 18.6 per cent which was the average increase for other workers last year, the increases recommended by the Clegg commission cannot ever be implemented.

The Clegg report compared the salaries of teachers with those being received by other analogous groups in April 1979 but, due to the introduction of the unprecedented principle of "phasing", teachers' salaries will not reach the April 1979 levels until September 1980, by which time, given annual wage inflation of nearly 20 per cent, the analogous salaries used by Clegg will have increased by almost a further 30 per cent.

If in the current (April, 1980) salary negotiations the teachers' accept increases which are less than those awarded to their analogues, then, since phasing prevented their achieving comparability last year, the comparative levels recommended by Clegg will never have been achieved. More insidious still is the danger that the employers will seek to make the principle of phasing, introduced last year, a

permanent feature of pay settlements. This would be nothing more than a thinly-disguised means of effecting a permanent reduction in salary levels since the analogues' whose salaries these teachers would in practice always be receiving, would have achieved their rises at the proper time.

There is a danger that the employers may try to use the fact that the Clegg award (itself a "catching-up" operation) has been phased into the current year to justify the reduction of this year's increase. The simple truth, however, is that if the April, 1980, negotiations give teachers increases which are below those now being offered to last year's analogues, or if phasing is again accepted, then the salary levels proposed by the Clegg commission will have been a mere illusion.

The Clegg commission cannot be said to have been overly generous to the teachers, but it has been accepted by both sides and should be implemented. An increase of at least 18.6 per cent now is the only way in which this can be done.

An award to teachers in April 1980, which is at least the equal of those being made to other groups is no more than a fair and proper corollary to the acceptance of the Clegg report.

J. BRIAN HODGE,  
Senior Lecturer,  
J. M. Marsh College,  
Liverpool.

Letters for publication should be as short as possible and should be written on one side of the paper only. The editor reserves the right to cut or amend them if necessary.

## Real and fantastic

Sir,—My colleagues and I share A. D. Pond's concern (April 25) over the "real and fantastic" side of the Burnham campaign and quoted by you and other papers as "serious" proposals for negotiation. I fall to see how any teacher could take these figures seriously and would like to assure Mr. Pond that his time and money is, if anything, an underestimation of the time taken for marking and preparation.

May I submit some real figures for comparison? In my own case, marking and preparation for 51 period teaching (45 weeks, 177 hours) is ludicrous.

(1) Average time to mark one plus set of 30 exercise books: 200 hours (especially English, Foreign Languages, etc.) as compared with 100 hours for the same work.

(2) Time needed to prepare one good lesson (ie thinking it out, writing, duplicating, worksheets, etc.) can often run to three man-hours or more.

Parents/Staff meetings (1) Staff meetings and department meetings often involve as many as three or four different sessions

after school or in lunch hours in anyone week; several hours is a very conservative estimate.

(2) Parents' evenings rarely take less than three hours of teachers' time—and you may well add another hour for travelling.

Pupil/teacher contact time (1) As A. D. Pond has pointed out, nobody could seriously consider a 51 period teaching week (177 hours) as realistic.

(2) The principal cause of teacher inefficiency in British classrooms is that there is too much contact time with the pupils.

The "average" teaching hour of British secondary school teachers is 25/40—ie 37.5 minutes. This is no wonder, for the teachers have to do a lot of other work as well as teaching.

As we should when we are marking this ridiculously excessive workload with virtually no compensation or incentive (see Timothy Rogers' article, April 25, pp 18, 19).

PETER HATCHWELL,  
Head of Languages,  
Durham School,  
Swindon.

## Help the Aged youth campaign

Sir,—I write in reply to the article entitled "Beggars and Jugglers" in the Talkback column of April 18.

Help the Aged's Youth Campaign has probably done more to highlight the conditions of old age in this country and the Third World as far as young people are concerned than anything else.

Changing attitudes is a long slow process and certainly cannot be accomplished solely by a short talk and a fund-raising event. Help the Aged's education department encourages a much deeper investigation of the issues and personal involvement with old people through its wide range of educational materials which are considered by many to be the best in the teaching of old age.

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## Fund raising for books

Sir,—My attention has been drawn to the article in *The TES* of April 4 describing the serious situation which exists in the Northamptonshire schools. In it you refer to our attempt to raise money by inviting all parents to contribute to a central fund for books and materials. You mention also the disaster this approach has caused among teachers.

The rights and wrongs of our action are debatable, what is no longer at issue is the result of our appeal, which was launched in April 1979. One of the schools in the county, in a relatively affluent area, has had to cancel its appeal. Another school, in a relatively affluent area, has had to cancel its appeal. Another school, in a relatively affluent area, has had to cancel its appeal.

Up to now, the campaign has been more successful than anticipated. The fund-raising work has been done in a very practical way, in many schools and in many ways.

TED SEVER,  
Vice-Chairman,  
Weston Park Upper School,  
Parent Teacher Association,  
Northampton.

## On the timetable?

Sir,—A recent study by the National Unit Company showed that over 60 per cent of the population were unable to read and write. This prompts me to wonder whether that very practical skill is taught in many schools and in what level.

Therefore, I would be interested to hear from teachers who do include timetable comprehension as part of the normal curriculum and to ask for examples of materials used. This information will be used to make a booklet about making basic timetable more intelligible.

DR LEWIS LUSLEY,  
Senior Lecturer in Training,  
Liverpool Polytechnic.

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## Science diary

What is to be done about research in British universities? We may know a little more when the joint working party of the University Grants Committee and the Advisory Board on the Research Councils, whose appointment has just been announced, reports. But that something needs to be done is by now abundantly clear. It is also plain that whatever remedies are suggested by the working party (whose chairman is Sir Alec Morrison, vice-chancellor of the University of Bristol), effective remedies will profoundly affect the relationships between universities and between the university system as a whole and the rest of society, the schools included.

The terms of reference of the working party are, superficially, narrow. The working party is to review the existing arrangements for the support of university research in the natural and social sciences, and to "consider" whether these make the most effective use of existing and likely future resources. Put more bluntly, the objective is to tell whether there really has been a collapse of what is called the "dual support system" by means of which university research is supported jointly by the research councils and the University Grants Committee. My own view is that the system has long since broken down, and that the quality and spirit of university research has already been seriously impaired. Moreover, if the present circumstances were by evil chance to persist for very long, calamity would result.

The theory of the dual support system is simple enough. Universities, the argument goes, are autonomous institutions with a responsibility for the teaching of students and the advancement of knowledge. The University Grants Committee is thus responsible not merely for supporting university teaching (which includes the education of postgraduate students) but also for providing the basic facilities—that will enable university teachers to pursue their research. Many research projects which properly belong in an academic



A chemistry student at work in the laboratory. Arrangements for the support of university research are to be reviewed.

environment are, however, too large and costly to be supported in this way, for which reason the research councils are responsible for making grants to support specific research projects. The Science Research Council (the richest of the five) is almost exclusively concerned with supporting scientific research in the universities, increasingly by provid-

## Needs for research: the breakdown of dual support

by John Maddox

log general facilities for research at publicly accessible laboratories.

But all the research councils (medical, agricultural, natural environment and social sciences) quite properly have their fingers in the same pie. In principle, at least, the dual system of support has the advantage that it allows support for particular kinds of scientific research to be concentrated in the universities where it may be most effectively carried out.

Not all the strains of the past few years have been financial, but lack of money has been the dominant, conspicuous sign of trouble. The UGC's equipment grant (now more than £80 million a year) is plainly inadequate to ensure that all university laboratories are sufficiently well-equipped with up-to-date equipment to be able to function efficiently. I know of several university laboratories whose share of their university's annual equipment grant is insufficient to pay for the cost of maintaining electron microscopes or computing machinery, and where senior (and relatively well-paid) academics spend part of their research time as electronic technicians.

Funds for supporting research projects are also now inadequate to meet the potential demand. It is probably still true that really imaginative research proposals are at the end supported in one way or another, but there are now increasing numbers of university teachers who have to make do with such research facilities as their universities have to offer. It would of course be ridiculous to suppose that every university scientist has a right to a research council grant, usually enabling the person to employ a research assistant or a technician, or to purchase expensive materials. But the now chronic shortage of funds has prematurely persuaded many academics to go slow on research, and to worry about their pensions instead.

The most serious consequence of the present difficulties, which worsens as the academic profession is squeezed, is that it is now only a select group of people with good ideas

to build within their own university departments the small groups of committed people upon whom, in the last resort, effective research depends. It is no wonder that the morale of university research people has sharply declined.

So how should the Morrison working party set about tackling this problem? The simple solution would be to recommend that the funds available for research should be increased substantially. But that is neither compatible with the budgetary restraints which, in my opinion, properly are likely to persist, nor for the foreseeable future, nor consistent with the underlying need that university research should be organized in such a way that such resources can be used effectively.

It is hard to avoid the conclusion that this will be possible only if it is accepted that not all university departments should be expected to maintain research programmes on their own premises. It may even be that some universities should withdraw totally from in-house research.

The cry will go up from many academics that such a development would strike at the root of the principle that undergraduate teaching and research are inseparable. So, I believe, they are. But there is no reason why academic departments should cease to be scholars if they cannot potter about in a laboratory on the spot in between the first morning lecture and the coffee break. It would be an inconceivable for very few experimentalists among them to have to use research facilities elsewhere, at other universities or at publicly supported research establishments, but energetic people could keep their hands in by such means. The alternative is, of course, even less palatable: that many science departments, or perhaps even some entire universities, should be closed altogether.

This is the point at which the problems of university research impinge on the other elements of the education system. If some university establishments are closed, it will be places without a full complement of scientific research

on their own premises, and leavers will have a vivid interest in seeking places at the more complete institutions. Not all of them will succeed.

In circumstances such as these, the interests of scientific research itself, that the most talented people should have a chance (if they wish) to try their luck, and of equity in the dealings of the university system as a whole, with its students, require that people should be given a chance to engage in scientific research simply because they have spent their time as students at what the Americans would call a liberal arts college.

This, the Morrison working party will find, is where the rub comes. Its investigation will not be complete unless it includes a study of the way that undergraduates should be selected for postgraduate courses, and of the way that the rub comes to look after their own bright students by means of the quotas of postgraduate studentships awarded by university science departments to the research councils.

Some way of doing the job for the college as a whole, individual university and university departments will welcome such a prospect.

Predictably, the universities are divided to become liberal arts colleges, when eventually they are identified with kick and scream what will seem to them an acceptable fate. What is needed, some device for making sure that they see the prospect of change as the opportunity it could be, and where in the world their British institutions, staffed by scholars who concentrate on undergraduate teaching contribute powerfully to the richness and quality of higher education.

But plainly it is an issue that Morrison committee cannot hope to tackle within its terms of reference, which is why it seems inevitable that it will recommend a further step: that in any case long overdue—more searching enquiry into the "social" function and organization of higher education, even—perhaps—officially—the Robbins report.

## features

# Finding a new public

In the second article in our pressure group series, Biddy Passmore reports on the changing role of the campaigning Advisory Centre for Education



The changing face of Where, 1963, 1973, 1978 and 1980.

"Do parents have any legal rights in the choice of state secondary education for their children?"

This cry for help, from a housewife in unawakened Kent, is typical of the letters flooding in to the Advisory Centre for Education, the "educational watchdog body". In a bewildering world of distant headmasters and even more distant officials, the centre is a friendly place to which parents can turn. It offers advice on an array of subjects—anything from choice of school to ways of removing an incompetent head to the cost of cancelling a school skiing trip.

But the centre doesn't just have a passive role. It is a highly active pressure group as well. That's why its staff prefer the description "educational watchdog body" to "consumer association": it has a more positive ring. "The word 'consumer' implies passivity," says the centre's director, Peter Newell, "and parents aren't the basic consumers anyway."

In fact, ACE is the only independent group representing the users of the education service. Although it has no view of an ideal education service, it is working for a different approach. "Our views are based on information and communication," says Peter Newell. "We believe that decisions should be made democratically, and not by some autocrat in county hall."

The centre was founded in 1980 by Michael Young (now Lord Young of Dartington) who, following the success of "Which?" and "The Consumer" Association, thought he would apply the same approach to a social service. It started in Bethnal Green, moving shortly after its foundation to Cambridge, where Michael Young had a fellowship and cheap premises were to be found in Trumpington Street. In those early years, people joined by contributing 10p for four issues of the magazine *Where*, and paid a fee for advice.

The fee-paying element brought in articulate, middle-class parents interested in a highly academic education for their public schools. Peter Newell says, "The sort of minority who will always make the most of the system anyway." Or, as one of his co-workers puts it, "We did all sorts of dreadful things in the past."

Publications reflected the centre's clientele: *ACE Guide to Independent Schools*, *ACE Guide to Tutorial Colleges*, *Choosing a University*, *Choosing a Polytechnic*. But the centre was already experimenting with less traditional forms of education.

It set up the National Extension College in Cambridge, forerunner of the Open University; started a cooperative nursery school; and established education advice shops in department stores and residential in-service courses for teachers.

By 1977, however, the centre was in the dumps. "It was a very depressed period," says Peter Newell, who was about to take over. "We had accumulated a large deficit, the staff were very demoralized, and income from publications was falling low."

When the lease in Trumpington Street expired, the council decided to cut their losses and move back to London; much went stuck in their throats to admit ACE was a national body and its place was in the capital. So with Peter Newell, then working at the White Lion Free School in Islington, as the new director, the centre moved back to the building in Bethnal Green where it had started life. The two remaining members of staff, one full-time and one part-time, moved down too.

Since then things have looked up considerably. There is now a full-time staff of six; the deficit has been halved, and the future looks relatively secure. More important, ACE has established new priorities and found a new public.

When Peter Newell took over, he had a long hard look at the centre's activities, and decided it was duplicating effort in some areas and failing in others. Why, for instance, should ACE be giving advice on independent schools? "There were plenty of organizations around to do that already," notably IBIS (the Independent Schools Information Service). "And there was more than enough to be done in the misty, misty sector."

So that particular form of advice has stopped. In fact, all advice for fees has stopped. ACE decided that if they were going to reach those parents who really needed help, advice must be provided free. So all their income now comes from magazine sales, including *Where*, and one-off grants from foundations like Gulbenkian and Mullfeld, which finance their campaigns.

In their three basements, where the slightest careless movement can send piles of paper cascading to the floor, ACE workers lead a busy, cooperative life. They run their office as they believe schools should be run: decisions are taken jointly, responsibility for all tasks is shared. Even the magazine is a cooperative effort.

Peter Newell and his staff want people to make better use of the system, so they publish information sheets and guides, such as a best-selling handbook on school

closures, *Schools Under Threat*. They answer at least a hundred phone calls and about the same number of letters every week—excluding straightforward requests for publications.

No attempt is made to give advice on a particular school or teacher. Instead, they send a general note of advice, and try to put the enquirer in touch with a local pressure group, such as a branch of CASE (the Campaign for the Advancement of State Education).

Perhaps their most widespread medium of advice, *Where*. Circulation now stands at about 10,000, of which half goes to school libraries and institutions and half to individual parents and groups. At one stage, circulation reached 15,000 to 20,000, but that was in the "bad old days" when it was little more than a guide to the public schools. The attempt to reach a new audience has meant a temporary rejuvenation, but it is now gaining ground again, helped by a new, expanded format.

The centre's postcard shows just how badly such information is needed. "Our letters and phone calls show that a great deal of information is being suppressed," the staff comment sadly. "And our surveys of school records show that not a single head acknowledges that parents have a right of access to them."

ACE local authority surveys make them highly effective as a watchdog body. The centre sees them as vital at a time of cuts, when more and more local discretion is being given. Conducted twice a year, they elicit a good response, chiefly because chief education officers tell their officials to comply. They are backed up by "Where watchdogs", individuals who monitor local developments—mostly local CASE activists, college lecturers and interested parents.

The centre is a persistent and effective lobbyist of Government and Parliament. It has been a champion of the Taylor Report on School Government, bombardment of MPs involved with recent legislation on the subject with press releases and information. The staff are also heavily involved in helping the new party governments to get their feet under the 12,000 after the new Act is fully implemented, they point out. There will be more like 50,000.

John Salter, a parent member of Taylor, has written a guide for parent governors, *The School in its Setting*. The centre is also helping funds permitting to produce a series of advice pamphlets, and to start a scheme of local training courses.

Perhaps the topic uppermost in ACE's mind is disruptive units, the units that cause a one-day conference on disruptive

centre is against the units in principle, because the staff think it wrong to segregate children, and don't believe the existing units can be improved.

Most of the problems with children are two schools' fault, they say—citing as evidence the fact that many parents are surprised to be told that their children—quite cooperative at home—are considered disruptive at school. At the very least, ACE would like to see the consent of both pupils and parents made compulsory before children are transferred to such units.

One of the chief problems, they think, is the absence of any alternative to mainstream schools within the system. Children who are restless or troublesome tend to be shunted off to disruptive units. No attempt is made, they say, to develop long-term alternatives.

"We recognize that educational models involving people in all decisions are not going to be generally adopted," they say, "but we believe they should exist." Earlier this year, they held a conference on alternative schools, and launched the "Campaign for State-Supported Alternative Schools", which is now bringing in many letters of support.

ACE is also against the segregation of the handicapped in special schools, and wants to see as many as possible integrated into "normal" schools. They set up a Coordinating Committee for Integration after a conference on handicapped children in November, 1978, and have been lobbying Ministers, Parliament, and local authorities ever since.

What does the future hold for this small but influential group of workers? More magazine sales, they hope, and a more effective monitoring service. But, above all, they want to move into a bigger building, more convenient and more accessible than their basement in Bethnal Green.

With more space, they could establish a distribution network for their publications, have a "shopfront" into which people could wander, start up a library, and share adequate facilities with other pressure groups like CASE and STON (the Society of Teachers Opposed to Pupil Sanctions).

To do this, they would need a substantial fund of about £100,000. But they are not unduly pessimistic. They have managed to keep going in recent years without a penny of support from central government. There seems no reason why this well-informed and persistent voice should not win its case yet again.

The Advisory Centre for Education is at 18 Victoria Park Square, Bethnal Green, London E2 9ER. Tel: 01-980 4366. New weeklies are in, as the Programme for the 1980s is published (PRIS).

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# Monday's Children

We asked children aged five to 11 to describe what they do on Monday, and what they would like to do. The 3,000 odd entries came in all shapes and sizes: some typed by devoted staff, some written out in "best", some as first written. We judged them entirely on content, not presentation.

Many entries, as we had expected, were straight description. They gave a fascinating picture of primary school work and life (see report last week). But they did not, as we had asked, offer judgments and suggestions. Some children wrote only about what they would like to do. The results were often well-written and

delightful but they did not fit the specifications.

Tim Francis did exactly what we had asked, in a witty and well-shaped piece of writing. The first prize of £30 goes to him, with a bonus of £150 to his school. It was harder to choose 10 runners up, and we ended with a mixed group who all stood out in some way from their contemporaries: some for wit and elegance, some for evidence of serious thought, some for originality, some for down-to-earth balance. They all get £15.

We publish here a long extract from the winner, and short samples from the runners-up.



**Tim Francis**  
Age 11  
Marlborough Middle School,  
Harrow,  
Middlesex

## Exploration Monday

Blat off at 8.55. The Thunder roars and we spring to our stations in the playground, ready for another exploration into the mysteries of learning. Another Monday to Friday, oh it is under command, and meaning to say, the pea is still in the whistle.

One of the basic necessities of any exploration is the availability of food supplies, and this, first thing on a Monday, the staff have the arduous task of collecting and counting the dinner money, which does nothing to improve their tempers.

Then comes assembly. All things bright and beautiful on a Monday morning, when the sky is overcast predicting a downpour and consequently no play-time.

Assembly over, the order of the day is maths; five, four, three, two, one, zero. This week's concern is tessellations. We learn that the tessellation of squares is too common and ordinary to merit the teacher's approval. Something more obscure must be sought.

We progress to more original and complex designs but our flights of fancy are curbed by work from "Top Ten Mental". Whatever happened to the bottom and middle 10? After a stiff bout of calculations, we are released for the best event of Monday morning: Playtime. Flashing by and music is upon us in no time at all. The teacher is temperamental because of Monday morning, but unfortunately the tape-recorder never is. Since school began it has never had a single day's illness to my knowledge. When not playing, it would seem that it is perpetually recording to regurgitate the broadcast singing Teacher.

The teacher and the tape-recorder take up for half a lesson each. I prefer the teacher, because the tape-recorder is unable to prove about having our backs as the teacher does when the tape-recorder is in operation.

After the necessary reuniting of staff and pupils we begin the afternoon, the last stage of Monday education, with Topic Work. For me Topic Work means converting chunks of books into my own words and copying the accompanying pictures. Usually it seems that quantity will make up for lack of quality but not vice versa. Suddenly the bell rings. Chairs fly up and books are hastily crammed away.

"Er now class," the teacher mumbles, "Your homework tonight is..." but he stops in mid-sentence. The classroom is empty. Another Monday is over.

As I am walking home, I put Monday to rights. Administer of education, T. Francis lays down the law. I plan the sort of day I would really like. To start with, a time for writing about something that is of special interest to me, or a time in which I could draw or paint, make a model, or write a story, to make a less abrupt start to the school week.

I would like to work harder for a shorter time in mathematics. I would like more problems involving calculations, and some good, mind-bending exercises, such as you find in puzzle books.

In music I would leave the tape recorder on the shelf for a much needed holiday and I would try and let the children see some orchestral instruments and their players. I would let them listen to Beethoven, and Scott Joplin, Mozart and Gilbert and Sullivan.

Topic Work would be based on first-hand experience. Children would go on voyages of exploration, round the park along the street. It would not be necessary to go far for the children to learn to look at things with fresh eyes. But never mind about T. Francis, Administrator of Education. Better things are to come, tomorrow is Tuesday.



**Kirsten Williamson**  
Age 11  
Comiston Primary School,  
Oxfords Green,  
Edinburgh

Our school, which is meant to hold 300, is at the moment holding about 350, while the one beside us which can hold many more is holding fewer. I think that if both the schools changed buildings it might help.

We usually start our morning with a horrible "thing" known as Top Ten Mental. You are meant to do the exercises in your head and most of our class find it nearly impossible. They have questions like this: "A garden has a length of 31m and width of 27m. In the centre there is grass and a rose border around it. The grass is 17m by 14m. What is the area of the rose border?"

If they expect us to do that in our heads they must be crazy. Actually we make notes on scraps of paper or on the back of our mental lotters. We then get mathematics (maths) for which we use four books: Modern Comprehension Arithmetic 4 and Modern Comprehension Arithmetic 5, and Making Sure of Maths 4 and Making Sure of Maths 5.

Making Sure of Maths is quite interesting as it has puzzles, things to make, and pictures, whereas Modern Comprehension Arithmetic has not any pictures, not many puzzles, and hardly anything to make. The playground is not very big and in the winter we are not allowed on the grass. We have one brilliant thing that I am sure not many schools have, and that is a wood. It is not very big. I mean it has only got about 10 trees and five stumps, but that's enough.

We then go back to something not exactly boring, and not exactly brilliant, music. In our music lessons nearly everyone falls asleep. I mean it is not really surprising as we sing things like The White Cliffs of Dover and Ye Banks and Braes. Why don't we sing things like Just Another Brick in the Wall or Message in a Bottle? People might not fall asleep then.



**Nicholas Smith**  
Age 7  
St Mary's School,  
Wheaton Aston,  
Stafford

Soon after the bell rings I line up for assembly. Then I go into my classroom

and I do five-a-day maths. After that I do more maths. After that I go into the playground. The bell rings and I go into my classroom and watch television for half an hour. At 11.30 we talk about the pictures that were on television. And then we do English.

On Monday I would like to go into the hall and have assembly for 20 minutes and after 20 minutes I would like to go into a pottery room and have pottery lessons and that would take a long time. After that I would go across the road to a studio. There I would paint the pot that I have made and then I go back into my classroom and have a good time on English workbook.

After dinner I would like to go into the playground with my teacher. My teacher will open a big gate with a big key and then she'll open a little house with a lot of woodwork tables and I would like to do woodwork for an hour. Then I would like my teacher to give me a big piece of sugar paper with all sorts of proper sums on it and I would make a maths book.



**Daniel Hayes**  
Age 10  
Harris Middle School,  
Lowestoft,  
Suffolk

This is a typical Monday. Harris Middle School-style. A double period of Practical: break; Maths; Music; English; Lunch; French; a double period for Integrated Studies.

Practical This is a subject I, and a lot of other pupils, enjoy. It is Art, Ceramics, CDT (Craft, Design and Technology), Cooking and Craft in one word. I think Art is a very useful subject because it provides an outlet and it proves to be a very interesting and individual subject for a child to express his/her thoughts.

Music is a subject which I don't think should be offered on unprompted children like myself unless they consent to do it.

In this subject I think more should be done in the way of creative writing. One thing I despise in English is comprehension and work out of books where all you have to do is answer questions. Because it's so refined into one wavelength of yes and no right and wrong.

French I think French is an interesting subject. One thing that I think should be done more often is word games in French. Or the subject of tapes. I think tapes should only be used occasionally, because the voices often mumble and it is even more distorted if a bad tape-recorder is used.

What is missing? The main thing I think is missing from schools catering for my age group is debates and discussions.

A part of the day should be spent in formal education, but the other part of the day should be spent developing the child's own interest so that he can do his own out-of-school work. Because in a class you get as many interests as pigs in a pigpen. You may get interested

Following last week's report on our 'What I do on Monday' competition, we publish this week extracts from the winning entry, and those of the runners-up

varied as old Lowestoft or genetic engineering.

In science I think a basic knowledge of the utensils should be acquired, then the teacher should set the class a problem and small groups work it out using their own ideas.



**Dominic Porter**  
Age 10  
Peterston Super Ely Primary School,  
South Glamorgan

School on a Monday morning, chaos in the house, into the car then through the school gates.

"Hi, Dom, wanna game of soccer?" "OK, which way am I kicking?" "Against Rees, we're winning 2-1!" "Cricket, Field, watch the pushing."

I usually play soccer before registration, then we go into lines. Into school and formal maths is first (worse luck). After that it is out to play; we are never allowed on the pitch first play but usually find something to do. After play we have got Primary English. Then it is dinner time. I have sandwiches, not looking forward to Beta but it has to be done. After Beta we have another break, then it is games.

I would prefer to do more up-to-date work. For instance, learn about computers much more work with terminals. I think we should have a chance to think of new energy sources. I am sure we are just as good as Einstein! We should be taught early how to do adult's jobs. After all, the world's children are its future.



**Sacha Baron Cohen**  
Age 8  
The Haberdashers' Aske's School,  
Elstree,  
Herts

I go to school of my own free choice. My parents told me there is a law that little boys must go to school. But I am allowed to choose myself whether I go to school or prison. I have chosen to go to school, to know how to swim.

Sometimes, on a Monday morning, with five long days till next weekend, I sometimes wonder if I went to the wrong place by mistake.

Now school is a wonderful thing, as everybody knows. It is tremendously good for teachers, and headmasters simply cannot do without them. I am lucky to go to a good school. We learn many useful things that will help to make us better people when we grow up. In history, I learn for instance how the Stone Age people survived. This will help us through many bad English winters and strikes.

My first lesson on Monday morning is English. This reminds us of the correct way to speak and write English. This is very important as most of the boys have been watching television and speaking with their parents all weekend. By the end of one English lesson, things, especially our English, are more or less back to normal.

Our second lesson on Monday is maths. Maths is my favourite subject. In maths it is a great comfort every Monday morning that one-plus-one still equals two. All sorts of things may have happened over the weekend. Russia may have invaded Afghanistan, England may have lost against the West Indies at cricket, and the price of Smurfs has jumped 5p. But in our maths lesson nothing has changed. One-plus-one still equals two. There are sometimes problems over vulgar fractions, and about exactly where the decimal point has to go. But on the whole, after Monday morning's maths lesson, the world does seem a bit more reliable and less insane than it did on Sunday night.

If I had to change something I would make everybody go to school to learn again. That would make the world a better place, especially if teachers had to come back to school to learn again what it was like to be a schoolboy on Monday morning.



**Ben Tunstall**  
Age 7  
Bishop Gifford School,  
Wimbledon

On Monday we have our new spellings and do diary. I do not like one of those things therefore I have thought up some of my own. I am interested in designing, so I have designed a Christmas pudding machine. I think that my class could do it because it is not too difficult for us.

We would sell the Christmas puddings to raise money for our library project. What I think we should do to get the things we need is a class outing to the dump.

A list of the things we need to make it. An old water tank, pipes, egg wheels, some buckets, etc. If the things were very dirty we would clean them up. [An extremely detailed description, with working diagrams, followed by instructions: Mixer. We would cut holes in a lid of a plastic box and put four egg wheels in it. Then two long pipes would be fixed in to two egg wheels. Then we would put two forks fixed into the pipe. On the egg wheels are two knobs and the shoe laces go round them. We pull hard on them and the egg wheels go round so the forks go round.]



**Heather Taylor**  
Age 10  
Zion Primary School,  
Oldham

Perhaps I had better explain about my school building before I go any further. Just over a year ago we moved from an old church school where water was always pouring in through holes in the roof if it rained hard. We could have no indoor gym lessons because the infants used the hall as their classroom. Therefore, I thought that I would like everything about my new school.

There are however a few things which I really hate about it. On Monday morning I would like to hang my coat and things on a proper hook but instead I have to fight my way through a lot of other boys and girls who are trying to put their things on to a small trolley where the coats are always falling off the funny hooks and my shoes never stay on the shelf underneath the coats. At playtime I have to play hunt the shoe, as mine is usually buried under heaps of other's. Then I go to my tray for my books. This is only small and hooks get stuck and bent. How I would love my old desk back! It had plenty of room and was always neat and tidy.

I love art and craft but this can only be done in a small group as the art area only holds eight people at a time. It is no fun painting when all the time we have to watch we do not spill on the carpet. In our old classrooms we always used to finish with a story but here we only have a story if the staffroom is empty. Open-plan has made things difficult for us. The only answer is to start building walls and cloakrooms. They would be lovely.



**John Price**  
Age 10  
Blacklick Primary School,  
Walsingham

The things I like best at school are sums and reading cards, word cards, building, and reading and assembly.

I like my day when we are in the hall. The things I do not like are carrying this to the harvest festival and fighting in the yard.

I would like to work all the time instead of having play. I would like to have some woodwork so I could make a dinosaur and a model aeroplane. I would like to play football in a red-white and blue strip, and cricket for the school but we have no cricket pitch! I would like to know how to swim.

it will be interesting fun and nice to see and do.

What we do that is boring! Springboard. In springboard there is a sentence with missing words in it and the words have two letters like fr or something like that. I do not like that sort of thing at all.

What I think is missing. What I want us to do is make machines, write more stories, draw and go on outings!



**Saul Billingsley**  
Age 8  
Silloth Primary School,  
Carlisle,  
Cumbria

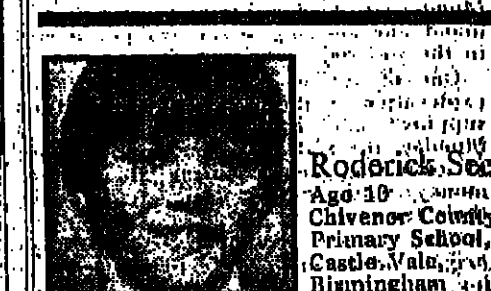
We sit down to read. I do not like the reading books we have. Most of them are old and tattered. Also they are very easy. This means the good readers run out of books to read. Now we do our English. I do not like the kind of English we do. Our books are boring. I would like a book where you have to write poems and plays to act. Also the teacher goes through the exercise with us, so we do not have any use for our brains.

At assembly time everyone has to line up in the corridors because we have no hall. It is nasty at assembly time because the corridor doesn't carry the voice of the person speaking.

I wish we had a hall so we could be comfortable in assembly and so we could do plays and proper concerts.

I love history and I think by the time you are eight you should do it regularly. In our class we did work on Cavemen and that was the first history we had done for weeks.

When we do painting we haven't got any room to do it. There is a small side shelf but otherwise we have to do it on the floor. I wish we had some space in our school.



**Kodrick Seal**  
Age 10  
Chivenor County Primary School,  
Castle Vale,  
Birmingham

Most schools learn maths in maths lessons and English in English lessons. At Chivenor Primary School, however, we have a new and interesting way of working.

We do not start our day like most classes do with a maths lesson and then at 10 o'clock change over to an English lesson. In the morning we might learn about rainbows. We will all draw our own work and write about our rainbows and how they are made. We learn about angles of refraction and light, or draw or say a picture of a rainbow.

All of the work that we do is about things we have seen and done or studied and enjoyed, and I find this very interesting because if you go out of school and actually see something, it is easier to write about it than if you are guessing or using books.

My maths and reading is blending in with all our other work and it is about things that make sense. If you are interested in something you can find out more about it. I think our class is getting very interested in the world and learning how to look after it. We learn how to think for ourselves.



# review

Higher Education Revisited. By Lord Robbins. Macmillan £12.00. 333 28605 5.  
Higher Education for the Future. By Charles Carter. Basil Blackwell £7.50. 631 11331 2.  
Process and Structure in Higher Education. By Tony Becher and Maurice Kogan. Heinemann £12.50. 435 82507 0.

Two of these books are readable. The third hardly is, except perhaps by colleagues trained in the same tortured mode of expression. The two readable books are by writers with long experience in higher education, but both economists by discipline and with no obligation, except their deep concern, to write about higher education. The third work is by a professor of education and a professor of government and social administration whose chairs carry with them the duty of informing and enlightening their students and the interested public about such matters. Both use of good repute, educationists whom I respect (though my personal acquaintance with them has been slight) and to whom I would not wish to be unkind. But the contrast between the way that they, as professionals, conceive that they should study and write about their subject and the way the two distinguished laymen do so is so sharp that I must emphasise it even though this leaves rather little space to consider the content of the books. What happens to higher education in this country will turn not only on what academics want but on governments and public opinion; and the way those who should advise us in fact communicate their views is of great significance, and of significance that goes beyond these three books.

Lord Robbins says in his introduction that he has found most modern books he has read on education rather heavy going. He had better not try the third of these three. I can only say for myself that after getting through four chapters I had to stop and listen to some Mozart to relieve my frustration and recover my delight in lucidity. Something really has gone wrong if, as I fear, this book is at all symptomatic. I hope Tony Becher and Maurice Kogan will not construe my criticisms as a personal attack but will ask themselves seriously if the supposedly academic method they use and their sentence-by-sentence writing do not create a quite unnecessary barrier between what they have to say and their would-be readers. The contrast between their style and that of Lord Robbins and Sir Charles Carter will be the first thing that strikes anyone who reads the three books, and, unfortunately for Becher and Kogan, so far as they are concerned it may be the last also. Let us look at the books in turn.

Lord Robbins uses the device of letters to an imaginary correspondent who asks him how he feels about higher education—17 years after the publication of the Report that is regularly known by his name. This provides lengthy systematic treatment and permits an informal tone, and this is what he wants, for he has no wish to go over the whole ground of the Report again in its own systematic style. He handles the device really. Many people have wondered how he thinks about these things now. Here, representing his attitudes to a friendly questioner, are his replies.

There is always a tendency to suppose that with the passage of time, once an impressive view must be out of date, and not to distinguish between underlying principles and the accidents of circumstance that of course make modifications necessary. So with the Robbins Report. The Committee's forecast of the number of young people who might have minimum university entrance requirements proved too low; but it was forgotten that the Committee deliberately chose the lowest

# Minds on higher matters

by  
Lionel Elvin

of three possible estimates lest those who distrusted expansion might be even more vociferous. Again, the connexion between higher education and economic development was too narrowly construed, but the general connexion can hardly be disputed. The Committee was too hopeful about the use of manpower planning, though Lord Robbins himself never was (I was one of the sinners here, and I now fully accept Lord Robbins' doubts).

Some criticisms are still off the point. Sir Charles Carter thinks the Committee should have paid more attention to the curricula of studies, but forgets that the Committee's terms of reference asked it to report on the "pattern" of higher education, which clearly implies its structure more than anything else. We were not competent to go into details, subject by subject (e.g. medical education). We discussed how far we could go and decided that only general observations would be right (e.g. about what we felt to be the excessive reliance on very specialised degrees). But are the basic principles, stated in the first chapter of the Report, now superseded? Lord Robbins does not think so. To those who would say that the general principles that those who are qualified and willing to study in higher education should be enabled to do so is right enough but that we cannot afford it now, he replies that the way the demographic curve is going will lead to a fall in numbers in the 1990s. He is somewhat—but not excessively—apprehensive that the decline in numbers in that decade might be too great. Meanwhile the bulge of the 1980s can surely be handled.

Sir Charles Carter's book is a series of short chapters on the main problems of higher education. It is somewhat more systematic than Lord Robbins' letters but is not a treatise, being intended to be simply a thoughtful contribution to the discussion about the future of our higher education. The style is always clear and is occasionally enlivened by a sharp phrase. Carter accepts no fashion without asking why, and comes to his own conclusions. I do not agree with all his suggestions. For instance he would overcome the often unreasonable conservatism of academics about the curriculum by putting laymen on the committees that

decide such things. I think there are few laymen who would feel they had enough professional knowledge to be effective at that level. My own suggestion would be to have "externals" on such committees (as we do for university examinations), academic people from the same field but from institutions where they may do things differently. Nor am I sure that two year colleges, to take those who want higher education but some of whom do not want or are not good enough to take a degree, would work as well here as they certainly do in the United States. In a system where a first degree takes four years a two-year course is both a good halfway house for some and a reasonable terminal point for others. But if you have done two out of three years (as it would be here) you are almost bound to want to go on and get the full award. But with many others of Carter's suggestions I would agree, and they are all worth consideration. They can be considered because they are put forward clearly.

Now the third book, by Becher and Kogan, does have some good things in it. For instance, they emphasise the subtlety but strength of the tensions between the feeling academics have as to their proper nature and functions and the constraints that come from central agencies or the conditions in which they have to do their work. Further development of such points, with more neutral examples by way of illustration, would have given us a worthwhile book. But it is all spoiled by their bad writing and, as it seems to me, their misconceived method. The writing is not so much disguised by jargon as incurably "thick". The very title seems like a translation from academic German. Some passages are almost acceptably written and one wonders whether one of the authors—I do not know which—can write acceptably and has been infected by the other. But the prevailing style is like this sentence: "The functions implied in the normative mode of the central authorities are evaluative and judgemental; those in the operational mode are concerned with allocating resources and sanctioning new developments". A surfeit of that and the reader just gives up.

The more tiresome stultification, however, is the rigging-up of a so-called "model" within which their discussion of higher education is to take place. Now forgetting the studies and activities where a model may be useful and coming with a fixed mind to use here, what does it amount to? The authors want to establish categories of functions discharged by different kinds of agency or institution in higher education, each of which may have more than one "mode". You do this by giving each category functioning in each mode a little box. These are called "cells". Then you put all the little boxes in a rectangle and call this your "matrix". This really is erecting scaffolding to build a mousetrap.

The authors single out four levels in higher education: the central one (government and its agencies), institutions (e.g. the university or college), the basic unit (the department or research team) and the individual (the student or teacher). Each has its conception of what it should be and do, and its working conditions. This can all be said more directly. With words instead of a rigid geometrical pattern it would be easier to allow for the great variety of institutions and names for them that are in the real scene.

There is more careful and effective analysis of the meanings of the term "research" in a few pages of Carter than in this book with its "model". And he does it with right policies in mind, to test the too simple assertion that research and teaching should always go together. A poet, said Wordsworth, should be a man speaking to men. Writers on education should be no less.

community school with values clarification's educational programmes.

Let me do the test. The passage says that an experiment in teaching morals had an observable effect for the very first time. The improvement was not achieved by imposing accepted social values but by eliciting and clarifying principles in a school which itself embodied them.

Whoever wrote this passage cited is a past master of redundancy: the expense of meaning is high.

## Spurious entities

ling in a waste of words. He can not refer to an effect without calling it meaningful. He can not mention a classroom without a meaningless inflation into "classroom situation". But what does this inflation add? Unfortunately he is not alone. One of our weekly reviews recently referred to a "homosexual marriage situation". Where is the subtle increment of meaning? And why do we not refer to a heterosexual adultery situation? (Perhaps we do.)

Despite the excellent critical work set in

motion by *Private Eye*, you still run into situations everywhere: conflict situation, confrontation situation, work situation, performance situation, therapy situation, learning situation. Situations occur not in order to expand meaning but to convey meaning in clinical distance. It is the lingo of the white-coated worker, sometimes harmless, but always proliferating dangerously: worship situation, love situation, eating situation, mortality situation, living situation. Those who freely create situations are really claiming to belong in a cold-out universe of cognition where they themselves move expertly, clinically, knowingly. The word "situation" tells you who speaks not what is.

But the most dangerous inflation in the passage at the beginning is found in some things I find very difficult to give a name. So I will indicate by examples: dominant values patterns acquisition, teacher instructional behaviour values clarification's educational programme. I could call this sort of thing the expanded nominative, or I could exclaim against the creation of spurious entities. Words are piled together and erected into imposing heaps. The act of teaching becomes teacher

instructional behaviour just as the act of learning could become student positive reactive orientation. You and I are no longer in there doing things, let alone misdoing. We have been drained away into an agglomerate of words, a cold-out universe of cognition, reduced to a type of "situation".

Moreover, these hygienic, expanded entities, which try to speak so loudly of the scientific, analytic approach, also convey their evaluations. The cool gloss of the lengthened noun hides the adjective, which is the real meaning but to convey meaning is to belong in a cold-out universe of cognition where they themselves move expertly, clinically, knowingly. The word "situation" tells you who speaks not what is.

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David Martin

# Rays of Sunlight

Michael Clarke at the Leverhulme exhibition

Lord Leverhulme: A Great Edwardian Collector and Builder. Royal Academy of Arts, Piccadilly, until May 25.

The Royal Academy is not yet being as severely threatened as some art institutions and organizations but it has in recent years had to turn increasingly to the commercial world for sponsorship. The Lord Leverhulme exhibition, currently on show in the Fine Rooms at Burlington House, is, therefore, something of a propaganda appeal.

William Hesketh Lever, the first Lord Leverhulme, was himself a patron and sponsor of the arts and Unilever, into which Leverhulme's diverse business interests were absorbed, is sponsoring this exhibition. It quite clearly aims to celebrate more than the Golden Jubilee of the founding of Unilever. Leverhulme not only patronized artists and art institutions, he created, at Port Sunlight and to a lesser extent in other places, whole communities, factories, houses, schools, libraries, galleries and other public amenities. Benevolent despots like him do not exist any more but big commercial empires do: the Lord Leverhulme Exhibition offers an example of patronage on a grand scale which current big-business enterprises would do well to imitate.

There is not much to be gained now by criticising Leverhulme personally. A non-conformist, autocratic man, he was a Gladstonian Liberal and a fervent believer in Free-Trade. He also possessed contradictory motives. Attached to self-help himself he was unprepared to recognize it in his employees and when he extended



Lord Leverhulme and Port Sunlight Sunday School children, 1911.

profit-sharing to them it was in the form of provision for their housing and recreation rather than in direct cash.

Leverhulme had begun buying pictures in his early twenties but it was only when he founded his soap factory in 1886 that his serious collecting really began and this was for the specific purpose of advertising. He deliberately chose well-established painters whose work would be immediately recognized when it appeared on the hoardings.

The conservative taste these reveal was obviously part of the man and although he was one of the first of his generation to collect eighteenth-century English art there is nothing in the Royal Academy's selection or the vast collection itself that radically departs from the typical, eclectic outlook of late Victorian and Edwardian taste. For what is most original in his patronage we must look at Port Sunlight and The Royal Academy has very sensibly devoted one whole gallery to this enterprise.

Urban housing, built by employers for their workers, was new when Leverhulme began planning, but it was almost always in straightforward, utilitarian rows. What distinguished Port Sunlight from the beginning was the setting of varied housing, along with diverse community buildings and activities, in a park-like landscape. It was one of the earliest and best examples of wide-scale social planning along garden-city lines.

# Political men and machines

Norman Stone on a week's television

In the 1890s Bismarck would sometimes try to ride back into power in the manner of El Cid (he is on his own corpse) and it says much for Messrs Carter and Reagan that when Richard Nixon attempts a similar feat, he might be taken seriously. I was one of very few people who refused to get worked up about Watergate and was not at all disposed to curl up my lip when I saw him on *The Book Programme* (BBC2) on Sunday night, discussing his work on international affairs with a team that included Sir John Hackett, John Hackett, and Philip Windsor of the LSE.

I do not like kicking a man when he is down, but duty calls. Nixon was frightful. The eyes flickered back and forth like the proverbial used-car salesman. He rather embarrassingly sounded off about the Russians lying and cheating. He seemed to think we would all accept his word for it that Guevara, Brezhnev et al are war-mongers, because he had actually talked to them. The discussion was frightfully polite, and when A. J. P. Taylor made his usual economical and telling comments, he earned an "I studied history and have great respect for history professors". At one point Mr Nixon relapsed into that Martian language that Americans in authority will use: in the

1980s the Soviet Union "will be in a negative position with regard to oil". Sir John Hackett very ably exposed the evidence of a Soviet will-to-aggress, but I rather agreed with Mr Taylor's point that, when we have weapons, they are a shield, and when the Russians have them, they are a sword. No one mentioned that in Moscow's view, large armaments are needed, not just to deal with the west, but to cover China.

Islam once more occupied the news, what with the American fiasco in the desert, and the Iranian embassy occupation in London. How well the student demonstrators have behaved (there should have been many more of them) and how very agreeable if we could simply explain the reasons from this country. Everyone knows that it would solve the heroin problem overnight. On Sunday night (BBC 2) *The Heart of the Matter* endeavoured to show what Islam was about. A fortnight ago, *The Times* had an interesting centrepiece, on the theology of Islam; this programme might have extended the story. But again there was a disappointment. Women in headscarves appeared as though they were headscarves. A person from some religious agitprop said that Islam had to do with Brotherly Love, Truth, and Oneness with God. It all

# arts

## Artistic scrap-book

John Spurling

Late Antique, Early Christian and Medieval Art. By Meyer Schapiro. Chatto and Windus £20.00. 7011 2514 4.

The three volumes of Meyer Schapiro's selected papers have been published in an odd order: first *Romanesque Art*, then *Modern Art*, and now art of the period from the end of Classical Antiquity to the beginning of the Renaissance. The reason is not far to seek. The book begins promisingly enough with a discussion of the mousetrap and built-box on which Joseph the carpenter is working in one wing of the fifteenth-century *Mérode Altarpiece*. Professor Schapiro cites St Augustine:

The devil exulted when Christ died, but by this very death of Christ the devil was vanquished, as if he had swallowed the bait in the mousetrap. He rejoiced in Christ's death, like a bait of death. What he rejoiced in was then his own undoing. The cross of the Lord was the devil's mousetrap; the bait by which he was caught was the Lord's death.

The trap, then, is both a religious symbol and one element in a domestic still-life, but it also suggests (since the mouse was an erotic symbol) a sexual meaning: temptation, chastity and the mysterious relationship between Joseph and his pregnant, virgin bride. The essay winds up by invoking Van Eyck's Arnolfini wedding-portrait and the fantasies of Bosch.

The virtues of this opening paper (published in 1945) are those of Schapiro at his best: an exceptional curiosity and eye, for small detail, combined with an immense spread of literary, artistic and historical knowledge, so as simultaneously to open up a work of art and the context in which it was made.

Unfortunately, there are only one or two other papers which sustain this level of detective-cum-socio-

logical interest: most notably, perhaps, "The Image of the Disappearing Christ", from which we learn that the Anglo-Saxons of the first millennium invented a subjective, apostle-eye-view of the Ascension, only Christ's feet being visible at the top of the picture. Too much of the material is taken up with abstruse questions of dating and with the confutation of previous scholars' arguments. Was *Wetters* right to assign the frescoes of Castelseprio to the tenth century? Schapiro thinks not and tentatively (after 63 pages of text and 12 of notes) prefers the eighth.

Another art-historical *ignis fatuus* is the problem of attribution. Schapiro lacks professional horns with one Milard Moles over an Italian *Flagellation* acquired by the Frick Collection in 1951 and attributed by Meiss to Duccio. The outcome of the tussle turns in some part on the position of the left scapular's arm which Meiss considers "the most astonishing aspect" of the painting. No, says Schapiro, it is not all that astonishing and the piece is not good enough to be by Duccio. Nevertheless, he is primarily concerned with who painted the picture but then his own undoing. The cross of the Lord was the devil's mousetrap; the bait by which he was caught was the Lord's death.

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The fact is that this book is a scrappy collection of odds and ends, covering far too large a field. It will no doubt have its uses as a work of reference, but for more reading, like "The Image of the Disappearing Christ", it is all right.

# CUE theatre magazine

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# Chamber music, cushion music

Alan Fluck, director of Youth and Music, has been struck by the fact that young people rather like to listen to music seated on cushions in their own homes in preference to the regimented solemnity of the Festival Hall. And then came the thought that the two worlds of art and music meet too infrequently. Out of this has evolved the idea for a series of Youth and Music Cushion Concerts at the Royal Academy of Arts (not quite as cosy as one's home, perhaps). The audience will arrive early to look at the RA

Summer Exhibition and then listen to the music, seated on special orange scatter cushions. The first concert, with the Philip Jones Brass Ensemble, is on June 25. Whether or not the scheme will really create a whole new audience for art and music remains to be seen; meanwhile full details from Youth and Music, 40 William IV Street, London WC2 (Telephone 01-379 6722).

Next week is Music Week at the Wells. Sadlers Wells is host from May 12 to 17 to a series of chamber music concerts by young musicians. On Wednesday, May 14, there will be a special school performance at

2.00 pm organized by the GLAA - this is in addition to the daily evening events. Free tickets for the matinee are still available from Frances Colyer, 25 Tavistock Place, London WC1 (01-388 2211). August sees the first visit to South America by a British Youth Orchestra. The Lansbury School Symphony Orchestra (one of whose records was reviewed here on February 22) has been invited to take part in 12 symphonic concerts, workshops and seminars, in the 40th anniversary celebration of the founding of Buenos Aires.







## books

## In the realms of gold

Dilys Powell

**The Dorian Aegean.** By Elizabeth M. Craik. Routledge and Kegan Paul £7.95. 7100 0378 1.

**The Travels of Herodotus.** By R. P. Lister. Gordon and Breach £14.95. 96033 081 8.

Everybody nowadays goes to the Greek Islands. Miss Craik's book is a study, historical and cultural, of a group of those islands linked not geographically but by antecedents. They were settled by the Dorians, Vikings of the ancient Greek world, who came from the north, occupied the Peloponnese, ousted or at any rate displaced the Mycenaeans and in the south Aegean colonised a band of islands running from Melos in the west to Rhodes in the east. Were there Dorians there already? Homer implies that there were. Some day, perhaps, the archaeologists, who have transformed our knowledge of the past, will tell us. Meanwhile this scrupulous book gives the arguments and the sources for the long record. The 60 pages of appendices, bibliography, name index and subject index make this scarcely the ideal book for the traveller on a holiday in, say, Ks to take with him—not unless he is taking also for reference the works of, to name a few, Dawkins and Myers, Mylonas and Marinatos, Boardman, Chadwick, Palmer, a Liddell and Scott; a run of periodicals from the Journal of Hellenic Studies to the German Zeitschriften; and what not; and of course The Palace of Minos. It looks formidable.

And yet, as the famous old

scholarly names buzz in one's head—names wryly familiar to me in the far-off days when I lived in archaeological society—one feels a stir of excitement. Today Greece is a country with a desperate desire to be modern. But one cannot travel there without hearing behind the traffic and the hubbub of the tourists the sound of the past. Miss Craik's book satisfies one's desire to know.

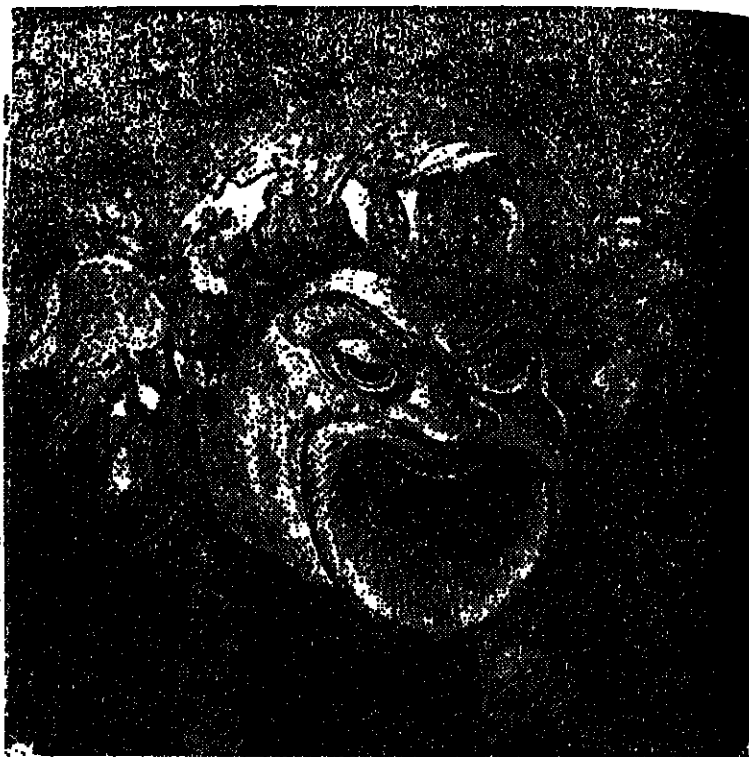
Natural that Rhodes, largest of the Dorian group—close to the Asia Minor coast where also there are Dorian settlements, and an important trading post—should dominate the study. To the traveller of antiquity, with its temples, theatres, dockyards, walls and harbours, it was a centre of civilisation; after all you don't often find a Colossus 32 metres high (a statue of Helios, actually) standing at the harbour mouth. The book, taking the story from the siege of Troy to the beginning of the Christian era, shows the island as the home of culture, a place of sanctuary to men banned from Rome. Theodosius, later to be Emperor, was among the exiles who chose to live there (and study philosophy).

But Miss Craik never neglects the other islands. The very productive Melos, where the Venus de Milo was found, was a source for obsidian, the tough sharp volcanic glass, which was better than flint for making weapons. Kalymnos exported sponges (it still does). The wine of Kos was enjoyed by Strabo and Pliny. Kimolos supplied fuller's earth; Roman ladies used it as a face-powder. And as the book follows Miss Craik's exploration of achievements in literature, medi-

cine and science, a picture emerges of an Aegean where in spite of the difficulties and dangers of seavoyages (the journey from Athens to Rhodes might take three weeks), people travelled, traded, wrote poetry and speculated on the nature of the world they lived in.

It is a scholar's work, one of a series of books on ancient Greece; one mustn't expect painless reading. Nevertheless one comes across enticing fragments of history and myth: the traveller in Scythia, for instance, might like to be reminded that Perseus, who cut off the head of Medusa and rescued Andromeda from a sea-monster, was an earlier visitor. And of course there are the great names connected with the islands: Hippocrates, "father" of medicine, is associated with Kos; so is the originator of pastoral poetry, Theokritos. As Miss Craik says, we are inclined to see Greek civilisation "through Attic eyes". Her evidence for an adventurous culture in the Aegean supplies a corrective.

*The Travels of Herodotus* is a pleasure book. It doesn't mean that it doesn't inform; it is highly instructive, at once a commentary and an enlargement. It accompanies Herodotus to Scythia, Babylon, Egypt and Italy, not to mention Athens. It quotes, it tells the choice stories, but warns that belief should not be slavish; thus we are told that Herodotus was fairly accurate about the habits of the crocodile but probably never delighted in the royal road to Susa. Delightful, but why should anybody off on the ancient world and the difference between history and fable I should urge him or her to read Mr. Lister.



Mosaic of Silienus, Rhodes.

## Greek ghost town

**Mistra.** By Steven Runciman. Thames and Hudson £9.50. 500 25071 5.

Mistra, though not on the same site, was the successor to ancient Sparta, but the contrast between the two towns could not be greater. Today

Sparta is a flat, rather dreary series of bumps in the ground broken only by a few wooden archaeological exposures. The power of the image its name evokes comes from generations of reading Classical Greek history.

By contrast Mistra is a ghost town. It rises up the side of a steep hill to an imposing castle on the summit. Its churches restored to give shelter to its treasuries on their walls. The secular buildings are ruined and roofless but frequently have their walls standing nearly to full height. There is a three-dimensional character to the town which is rare in more thoroughly ruined places. The image of Mistra, though, is virtually non-existent. Its history belongs to the unfashionable and unexciting periods of the Greek past.

Mistra began in the thirteenth century as a Latin castle—one of many petty strongholds carved out by the well-known crusader, the Emperor in the aftermath of the Crusader capture of Constantinople in 1204. With the Greek recovery of their capital in 1261 and the emergence of a revitalised empire under the Palaeologs, Mistra became the provincial capital of the Peloponnese. It was largely controlled by the sons and brothers of the ruling emperors and these factors brought it into the forefront of the intellectual and intellectual life of the time. By now the intellectual life belongs largely to the historian but its influence on the Classics of the Italian Renaissance should not be forgotten. The artistic fruits, however, are still very much present. The town is a treasure house of Byzantine works of art. They fall short of some of the great early Byzantine works of art but they readily compare with any contemporary painting included in that of the capital.

I started to read this book of Steven Runciman's with a great sense of expectation. I finished it in a daze, with feelings of disappointment. Runciman gives an efficient history of Mistra in all its various phases, detailing its ruler and its plunderers. There are odd chapters on the town itself, on its cultural life and on the art. There is there any of the excitement that the place provokes and which even the author claims to feel. The balance of the book is completely wrong. There is too much of the chronicle and too little description of the building life and the art. About half the plates look as if they came from research in an antiquarian library and are designed to supplement the record of a visually unexciting subject.

This book, will I am sure, be read by the admirers of Mistra (and Byzantium) and will no doubt provide a useful historical summary. I doubt, however, that it will alter many holiday plans.

Tan Caruana

## Frauds on the fairies

Lynne Truss on Dickens

**Dickens and the Invisible World: fairy tales, fantasy, and novel-making.** By Harry Stone. Nuncmillan £12.00. 333 27697 3.

"Frauds on the Fairies" was an essay in which Dickens vehemently attacked George Cruikshank's project of adapting fairy tales as tracts on total abstinence, and asserted the sanctity of fairy tales as "nurseries of fancy". "Frauds on the Fairies" would be a suitable description of Harry Stone's book, for he, like Cruikshank, is guilty of manhandling a delicate element of Dickens' "fancy" and debasing it by literal-mindedness.

His central line of argument is that Dickens, when employed at the blacking warehouse, plundered his imagination for remembered fairy tales in order to transform sordid reality, and that the habit of endowing the vividly perceived familiar with vividly imagined magical potential is the key to his technique as a novelist. Stone sees a clear progression in Dickens' work from incidental references to fairy tales in his early novels to a thorough incorporation of them in the structure of *Great Expectations*. About half the book is devoted to *David Copperfield* and *Great Expectations*. That these two novels are first-person narratives with all imagery derived from the emotional and fictionalising recollection of their narrators is not commented on.

But still, the book has a promising subject. Analysis of symbolism in Dickens' novels by recent critics has often shown them to have a remarkable unity of imaginative structure. Stone, however, acknowledges neither the work of



Dickens by H. Furness, drawn for "Punch" and "Vanity Fair".

other critics nor the function of symbolism. He seems to be concerned only to prove that the characters in Dickens' novels are attributes to fairy-tale archetypes and are therefore equatable with them. Florence Dombey, it turns out, is really only Cinderella. Bersey Trotwood is a witch who is transformed into a fairy godmother, while Miss Havisham is a fairy godmother transformed into a witch. One would respond with more gratitude for having such associations pointed out were they presented more tentatively, but as it is one is irritated by the insistent reduction of characters to single associations and bewildered by the assertion that this process of identification is itself "magical".

For example, the young David Copperfield, as has often been noticed, associates the new black dog in the previously empty kennel with its owner, Mr. Murdstone. Stone comments, "David's act of identification is also an act of transformation. He turns Mr. Murdstone into a dog. In this respect Copperfield is like innumerable fairy tales—like *The Six Swans* or *The Frog Prince*—in which a protagonist is transformed for a term into an animal."

This is then referred to as a "magical transformation". For Stone, in fact, anything that has any element that separates it from the strictly normal is "magical", "fairy-tale", "storybook". If it is not natural it is supernatural. Of Rosa Dartle it is said that "her most obvious fairy-tale sign is the terrible scar which runs across her mouth and down her chin". It is as if Stone were in a state of enchantment.

Readers of this book will not find themselves better equipped to deal with the many startling, often startling, fairy-tale references they encounter in Dickens' novels. How is one supposed to react, for example, when Pip, early in *Great Expectations*, says: "I had seen the damp lying on the outside of my little window, as if some goblin had been crying there all night, and using the window for a pocket-handkerchief"? What response did Dickens expect to elicit by such an outrageous image? Does it make Pip "a creature of goblins and a creature of ghosts"? The important question is, to adopt the words of Peggotty and Biddy: "Whatever put that idea in his head?"

## Lawrence in a landscape

Myra Barrs

**The Life of D. H. Lawrence.** By Keith Sagar. Eyre Methuen £9.95. 413 39950 8.

**D. H. Lawrence Country.** By Roy Spencer. Cecil Woolf, Kingly Court, London W1A 1AA. £3.50. 900821 44 2. £1.95. 45 0.

Keith Sagar's illustrated biography of D. H. Lawrence has two distinctive features. It draws extensively on Lawrence's letters—there are five thousand of them, and Mr Sagar is one of the editors of the complete edition of the letters, now in preparation. It is also copiously illustrated with reproductions of Lawrence, his friends, and his paintings.

The text is densely informative—Keith Sagar has condensed a tremendous amount of material into 250 pages—but it is the photographs which are the saving of the book. For as Lawrence's wanderings, and the tone of his letters, become more desperate and feverish, as each possible location for a communal whole community are abandoned one after another, the photographs nevertheless show him relaxed and amused, enjoying sunshine and the company of friends. Only they give very much sense of the difficulties of Lawrence's life. The cumulative effect of the quotations from the letters is quite contrary. They describe a man whose restlessness is a form of flight but whose depression, becoming

ing, inescapable, taints everything. "I find people ultimately boring, and you can't have fiction without people. So fiction does not, at the bottom, interest me any more", he wrote in 1918.

It was this same mood that informed four essays on education which Lawrence submitted to the *Times Educational Supplement* later that year and which were turned down by the then editor, G. S. Freeman. One quotation is enough to give the flavour, and account for the rejection:

Abolish all the bunkum, go back to the three Rs. Don't cultivate any more imagination at all in children; it only means pernicious self-consciousness, and all the damned high-flown must be taken out of them, and their little personalities must be slipped in the bud.

Roy Spencer's absorbing little book draws on Eastwood memories of the Lawrence and calls into question some traditional assumptions about Lawrence's family. His investigations of Lawrence's mother's background leads him to disagree with Lawrence's description of her social position as "superior... She came from town and belonged to the lower bourgeoisie". The careful factwork which produced this conclusion characterises the whole book. Spencer's local knowledge—he is an Eastwood man—means that he can situate Lawrence's early experiences in a real landscape and a familiar community, and this gives his book a particular strength.

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Part One Order No 8463 02 4 £5.75.

Part Two Order No 8464 02 4 price on application (publication: September, 1980).

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## Tales of great men and great events

Colin Platt

**A History of Europe.** By John Bowle. Secker and Warburg £12.50. 436 05906 1.

John Bowle's ambitious and courageous new book has something in it for everybody. In six main sections, it moves from Pre-historic Europe to Mediterranean antiquity, from the Middle Ages to the rise of the nation states to the Age of Discovery, with last words, surprisingly abbreviated, on Industrial Revolution, Democracy, and Nationalism. It is a book for readers who agree with the weighting he accords to each section. However, as one man's interpretation of the unfolding of a culture, it has a clear inner consistency.

*A History of Europe*, for all its unadventurous, has a boldness of sweep and a directness of opinion which are themselves very attractive. In particular, John Bowle's long interest in political thought has added an individual dimension to his discussion of European cultural civilisation. He likes great men and grand events, and is usually good at describing them. There are always merits in his personal view.

Sadly, there are snags as well. John Bowle has no time for the "tremendous myth" of Marxism. Fair enough, we may say, that is his opinion; but he has other private dislikes as well. In this year of rehabilitation of Vikings, Bowle finds them "tremendous bore". France at the time of Louis XIV ("the most dazzling and powerful monarch in Europe") is beset by "tedious wars" and "routine" of Louis XIV's queen is a "glib and boring princess". The book, packed with information not easily accessible even in a good school library, and not as our own over-priced. What it cannot claim to be a replacement for H. A. L. Fisher.

Final section, we are told that "it would be tedious here again to traverse the well-known stages of its (the industrial revolution's) early development", we are allowed ready to agree.

It is not that John Bowle has saved himself space by earlier rigorous excisions. He takes us on a leisurely tour through the French cathedral, for which John Bowle's *Man's Ghostly Good Taste* is one of his few quoted guides. In another instance he gives us a long Latin quotation, only to render it into English immediately afterwards.

The section on "Democracy" and "Nationalism" is a book for readers who agree with the weighting he accords to each section. However, as one man's interpretation of the unfolding of a culture, it has a clear inner consistency.

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## Paperbacks

## Verse, head, heart

John Horder

**The Composition of Four Quartets.** By Helen Gardner. Faber Paperbacks £3.95.

**The Faber Book of Religious Verse.** Edited by Helen Gardner. Faber Paperbacks £3.50.

**A Vain of Mockery.** Edited by James Reeves. Heinemann Educational £2.50.

**The Psalm with their Spills.** By Jon Silkin. Routledge and Kegan Paul £2.95.

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**The Psalm with their Spills.** By Jon Silkin. Routledge and Kegan Paul £2.95.

## Typewrite

**Introduction to Printing: The Craft of Letterpress.** By Herbert Simon. Illustrated by Tom Hughes. Faber £2.50. 571 1528 4.

Twelve years have elapsed since the original hardback edition of this admirably serviceable manual. It is serviceable because it is succinct, rational and dedicated to ascertaining the classic norms of its subject—but those 12 years have decisively changed "the craft of letterpress" and have rendered even more anachronistic an approach that was somewhat antiquated even in 1968.

This is, not to say that the book is not welcome—we need Mr Simon's sanity as much as ever. Some thought should have been given though, to slanting it more towards the needs of the thriving body of amateur printers who delight in the bits of type on paper, or else relating his comments on letterpress to the splendid works and office litho printers of today. (Say "Walbaum" to a professional printer these days and he will think you mean a domestic paint or an international tennis star.)

More work could also have been done on the bibliography, cutting out dead texts and directing attention to readings within specific areas of interest. Furthermore, Herbert Simon ought not to call Herbert Davis "Hubert".

Brian Alderson

## Among this week's contributors:

Myra Barrs is English adviser for the London Borough of Brent. John Horder is a poet and writer and the author of *A Sense of Being*. Philip Jacobson is a foreign correspondent on *The Sunday Times*. Colin Platt is lecturer in History at Southampton University. Anthony Smith is director of the British Film Institute.

## Violence and Responsibility

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University of Manchester

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University of Surrey

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Compiled by G. H. CALVERT

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# books

## Polishing the apple

Frank Anstis on the ILEA's new physics project

Applied Physics Project for Independent Learning. By the ILEA Physics Project Team. Student's Handbook £1.55, Teacher's Handbook £1.55, Structure of Matter £1.55, Teacher's guide £1.55, Motion £1.55, Teacher's guide £1.55, Wave Properties £1.55, Teacher's guide £1.55, Material Properties £1.55, Teacher's guide £1.55, Forces and Fields £1.55, Teacher's guide £1.55, Vibrations and Waves £1.55, Thermal Properties £1.55, Teacher's guide £1.55, Electrons and the Nucleus £1.55, Teacher's guide £1.55, Electro-magnetism £1.55, Teacher's guide £1.55.

Students in several Inner London schools should be able to answer the question: "What is the connection between an A-level physics course and an apple?" because they will have, as part of the APPL (pronounced apple) which is the acronym for the Advanced Physics Project for Independent Learning. The project's recon publication challenges physics teachers everywhere to consider the more serious question of whether or not the APPL approach has relevance in a wider context.

The APPL course, presented in 10 concise, half-term units with a variety of starting points, is a modestly impressive both in its flexibility and in its soundness of approach. Used properly, it must surely provide teachers with an opportunity for restructuring their class, for some, but not all, which will be uniquely beneficial to their students and to themselves. It is a project which could eventually have a much influence on the style of sixth form teaching as the Nuffield schemes have had on the development of modern syllabi.

Physics teachers should make it their urgent concern to study this material with the greatest of care.

APPL is essentially a programme for directing independent learning and it has not therefore been designed as a textbook. It relies instead upon a carefully selected list of A-level texts which include most of the better ones that have recently been published (although curiously omitting G. M. Mossop's *Advanced Level Atomic Physics*) and one or two older texts still widely current in schools.

Every physics syllabus contains topics which even the most lucid text has difficulty in explaining; at these points the APPL student guides (temporarily adopt the role of textbook and incidentally reveal their authors' considerable experience as teachers. Help is sometimes given by added explanation but often by carefully structured development questions.

Physics is taught as a practical subject and each of the 10 units suggests suitable experiments which are introduced at appropriate points in the course. The actual requirement for apparatus has been kept within reasonable limits, but organising the experiments will involve teachers in a considerable logistical exercise if the courses cannot be pursued in an adequately equipped centre.

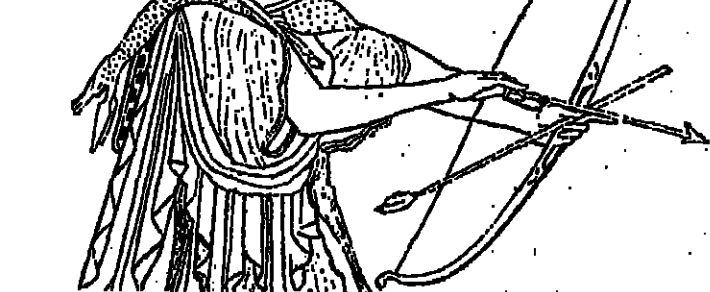
If students become genuinely less dependent upon their teachers they will need methods of assessing their own progress, and there are numerous questions provided for this purpose throughout the two-year APPL course with ample emphasis given to their importance. Students nurtured solely on a diet of relatively simple, and well structured

self-assessment questions from the APPL package would be no match for the wily A-level examiners, and teachers must continue to be responsible for ensuring that questions from relevant GCE papers are tackled at every stage.

The key to the scheme's successful implementation is contained in two guides. The teacher's copy contains an explicit statement of aims, the course's structure, and various methods for introducing a measure of independent learning to classes of different sizes. The student's guide is an equally indispensable companion for the APPL course, but it can also be recommended to other sixth-form physicists for its extremely helpful hints on study.

With a course prepared by such an experienced team, checked by constant testing and cross referencing to preselected teachers, and finally submitted for comment to John Warren and Patrick Whelan it is hardly surprising to discover that it is pleasantly free from major flaws. As with all new projects, it at first appears alarmingly difficult to disentangle the course from the jargon and to find one's way around the handbook and guides. It is far less daunting, however, than similar material from the Nuffield Physics project.

APPL appears as a stimulating innovation with tremendous potential for development. Its publishers, having transposed the acronym into an apple-like logo, probably expect us to associate it with the apple that triggered the inception of Newtonian mechanics. Only those unusually wary of change will think instead of that other apple associated with the full from of an Eden idyllic state in the Garden of Eden.



This drawing of Artemis is one of many such illustrations by Heather Copley and Christopher Chubb which adorn the Bodley Head's release of Roger Lancelyn Green's retelling of Greek myths, *Heroes of Greece and Troy* (£4.50). Now twenty years old, this is still a book to grace any young person's classic shelf.

## Children's literature

### Ride a cock-horse

Fred Urquhart

*The World's Greatest Horse Stories.* Edited by J. N. P. Watson. Paddington Press £5.95. 7092 0874 X.

I'm always a little chary of claims to greatness—except for Muhammad Ali's charmingly inflated one. I think, though, that the affection reserved for Muhammad can be extended to J. N. P. Watson's collection. His anthology really does contain many of the greatest pieces written about horses. Not all are here, of course. Everybody has his own favourites, and so, as Mr Watson says, the book "far from being exhaustive, does not pretend to represent much more than a tip of the iceberg of equine and equestrian writing".

It is a very large tip, however. J. N. P. Watson is the building correspondent of *Country Life* and has been a major in the Household Cavalry, a showjumper, polo-player and race-rider. His taste is catholic, his equine knowledge wide, and this is displayed in his very introduction. One of the 12 sections the book is divided into. Well-known pieces from *Black Beauty* and *National Velvet*, George Borrow's exhilarating first ride on a cob, King's pony poem "The Maltese Cat", George Sanger's writing with Lord Scampston's hounds, all jostle in the line-up with horses from Chaucer, Plutarch, Jonathan Swift, Cervantes, W. B. Yeats, Shakespeare and many others not likely to be mentioned much in happy circles.

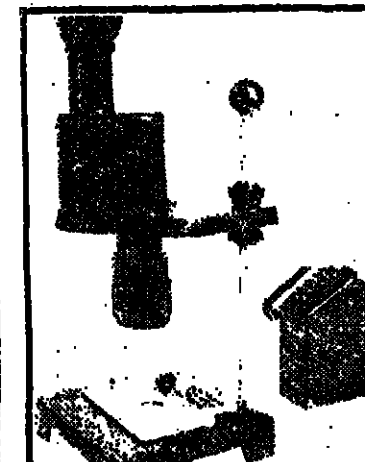
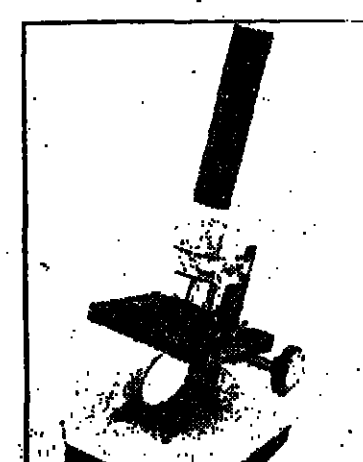
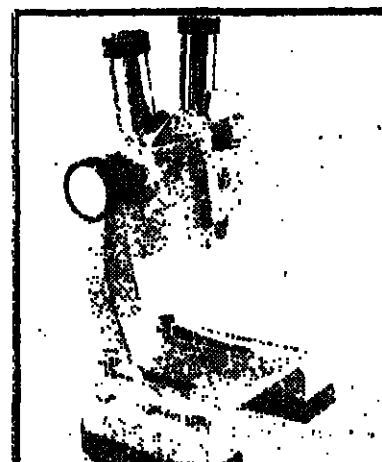
Few of the great names connected with horses are missing. Brave general guide to children and reading for all parents will be published on May 22nd (Bodley Head £4.95). A specialist bookshop and lecturer who runs a remedial reading service, Mrs Blyden has also collected stories and poems from her native New Zealand in *The Māori*, to be published later this year by Keats (£4.50).

Donoghue, Dorian Williams, Lucinda Prior-Falmer, Pat Smythe appear beside Washington Irving, Dickens, Conan Doyle and Winifred Churchill. John Hargrave gives advice to jockeys; "Nimrod" hunts in Leicestershire in the 1820s; and Pers Crowell writes about American Quarter Horses.

The book contains many surprises. It was a delight, for instance, to find the story of the Maharajah and the Lipikar from Kay Boyle's almost forgotten *White Horse of Yiemna*. Miss Boyle, who wrote some very good things about horses, is usually neglected by equine anthologists. Other welcome surprises are an episode from Roly Smith's *A Tree Grows in Brooklyn*; John O'Hara's story about an American small town boy on his way to riding lessons; and "Marco's" advice to polo players, written in 1931—"Marco" being the pen-name of Lord Louis Mountbatten.

It is disappointing that Tolstoy, who has so many horses galloping through his pages, is represented only by part of the account of the steppes from *Anna Karenina*, where Tolstoy breaks his mare's back by making a wrong movement. One might expect Tolstoy's much more famous horse, "Strider", here. But of course "Strider" is really too long for most anthologies.

This celebration of the horse in poetry, essay, story and legend is a delight to look at with its black and white illustrations and George Stobbs's picture of "Whistler's horse". And it is an even greater delight to read.



Left to right: The MNC 300 D from Griffin and George; the B 24180/1 student microscope from Philip Harris; the Offord Scientist microscope; the Omiraid LAM simple striped microscope and the Griffin and George MIS 300 N.

## Small worlds

JOHN WRAY surveys microscopes and magnifiers

Microscopes increase the apparent size of objects at the eye, and allow us to distinguish detail. Some microscopes, however, give very poor images, and it is the purpose of this article to discuss how to choose one. The models under review range from the simple (an individual lens or a number of lenses mounted close together as a single unit) to the compound (two widely separated systems of lenses). Simple microscopes or magnifiers give an erect image in a range from X2 up to X30. Lower power magnifiers have lenses of large diameter, often 50mm or more. They can be held some distance from the eye and are often mounted on a stand, or as part of a container to make a nature viewer. The lenses may be made of glass—large ones are surprisingly heavy—or of plastics.

The quality of the image is usually good, although there is often a noticeable decrease towards its edge. They also have a wide field of view, so an entirely large object can be viewed. Low power magnifiers can be quite cheap, especially if the lenses are made of plastic. However, plastic lenses scratch easily.

High power magnifiers, say more than X3, usually have several glass lenses mounted together either as a single fixed magnification lens up to or as separate lower magnification lenses which can be used separately or combined together to give higher magnification. The object has to be held near to the magnifier and the magnifier close to the eye. They give a small field of view, so only small parts of large objects can be viewed.

The compound lenses of these magnifiers will be of high quality manufacture and those giving the highest magnifications, since they need to be very close to the object to avoid image distortion, will be very expensive. The lower priced high power magnifiers will be useful for upper junior and secondary schools.

Compound microscopes with two widely separated lenses of systems of lenses are usually more expensive than the high power magnifiers. These microscopes may be either monocular, the image being viewed with one eye, or binocular when both eyes are used and a stereoscopic effect achieved. The image in most monoculars is inverted and the wrong way round, in consequence young children often find them difficult to use. The image in binocular microscopes is erect and the right way round, and the distance between the lower lenses and the object, to be viewed, the working distance, is large compared with that of monoculars. This means that large objects can be viewed. These are attractive, and versatile instruments, although people do not perceive the stereoscopic effect.

When using a simple magnifier good illumination is a considerable help. It is essential when using a compound microscope especially if light has to be passed through the specimen to be examined. However, in lower schools it will be unnecessary to buy special microscope lamps; table lamps with flex-

ible arms are often ideal or battery powered pen torches with lensed bulbs can be used. Motorists' battery lanterns with adjustable lamp units could be tried. Before buying any mains operated lamps, teachers must check that the type complies with local regulations on electrical safety.

It is not possible to buy one microscope which will do everything, so before buying there are a number of questions to be answered. What is the age and ability of the children? What do you want them to look at? How much money can you spend on the microscopes? Consideration of these questions should be in the order given, even though cost may seem to be of paramount importance. At all costs the cheap toy microscope is to be avoided.

It is vital to consider the age and abilities of the children who will use the microscope. Young children can often see as much with the naked eye as they can with magnifiers of up to X4, so it is their sight, and that of the teacher, that is important. However, they may not be able to handle heavy magnifiers effectively.

For children below seven to eight years, simple large light-weight magnifiers and lenses mounted in nature viewers or on stands are suitable; older children can use the higher powered magnifiers. The first compound microscope to buy should be a binocular as they are versatile and can be used even by young children. Binocular compound microscopes will only be needed by middle and upper juniors. Buy the more expensive monocular microscopes only after considerable thought!

The age of the children and the objects for examination will dictate the type of equipment. The table suggests 35mm transparencies for looking at bacteria and red blood cells. To prepare specimens of these and to use a compound microscope to look at them or compound microscopes, slides require skill and experience usually beyond that of junior children, and often beyond that of their teachers.

Having decided on the type of equipment required, there is gen-

erally a wide choice. Nature viewers are boxes, usually transparent, with a removable lens at one end and a fixed lens at the other. They can be used with transmitted light through prepared microscope slides or with top light on solid specimens, focusing being controlled by twisting the eyepiece, there are two in the range the ESM-X40 (£15.95) and the ESM-X100 (£15.95).

More advanced junior monocular microscopes include the Griffin Minor Microscope MIS 300N giving a range of magnification up to X200 (£29.50) from Griffin & George Ltd and the Harris Student microscope B 24180/1 giving a range of magnification up to X200 (£39.95) from Philip Harris Ltd. A mains operated illuminator unit (B 24180/2) to fit this microscope is available at £7.12. It is usual to use both these microscopes with transmitted light passed through the specimen mounted on a glass microscope slide.

After deciding on the type of microscope, or microscopes, to remain to work out how many will be needed. It seems practical to buy the simple magnifiers and nature viewers first, in enough quantity to avoid squabbles, next to buy a number of mounted magnifiers, then several binocular (stereo) microscopes, and finally one or two junior monocular microscopes. All this equipment needs to be stored carefully, so that it is accessible, and the numbers can be checked at the end of lessons.

Assuming that an infant and junior school are on the same site, if not in the same building, and that equipment can be readily moved around and shared, the following equipment might be considered adequate: simple magnifiers/nature viewers enough for one per pupil for one class—say 20 (about £30); five mounted magnifiers (up to £40); three binocular (stereo) microscopes (about £130); and two junior compound microscopes (up to £80). All the prices quoted are approximate and exclude carriage and VAT.

Magnifiers mounted on a stand are particularly useful since they leave the hands free. Suitable types include the Omiraid LEM X1.6 to X5.850 (£5.95 each or four for £20.25) from E. S. Perry; junior magnifier stand X25, H 41640/G (£1.15) and flexible arm magnifier X2, B 41020/9 (£15.05) from Philip Harris Ltd. Stereo microscopes are recommended for general use. Those mentioned are at the cheaper end of the price scale and represent very good value. They include the Swift stereo magnifier X15, £30.00/3 (£37) from Philip Harris Ltd; the junior stereo microscope X20, MNC 300D (£36.75) from Griffin & George Ltd and the Opar OWW with a range of magnification X15, X30 and X40 (£35) or OWW X15 only (£29.50).

There is a large range of compound monocular microscopes to choose from; those mentioned are

recommended for general use. Those mentioned are at the cheaper end of the price scale and represent very good value. They include the Swift stereo magnifier X15, £30.00/3 (£37) from Philip Harris Ltd; the junior stereo microscope X20, MNC 300D (£36.75) from Griffin & George Ltd and the Opar OWW with a range of magnification X15, X30 and X40 (£35) or OWW X15 only (£29.50).

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## Asking the questions

Mary Linington

*Assessment Questions for Integrated Science.* By S. Kellington. Heinemann Educational Science. Book 2 95p, 435 57503 1. Teachers' Guide £2.50. 57501 5.

*Questions in Combined Science for Years 1 and 2.* By G. Green, K. Pridmore, A. Short, D. Wilkes, D. Charles. John Murray. Book 1 90p, Teachers' book £1.25, Book 2 95p, Teachers' book £1.50.

These two sets of question books were written for parallel courses. *Assessment Questions for Integrated Science* follows the Scottish Integrated Science scheme, while *Questions in Combined Science* follows the combined Science course by the same authors.

*Questions in Combined Science* offers a public books and is the appropriate teachers' guides. The questions are graded in order of difficulty and vary in type, including

multiple choice and open ended ones. The teachers' guides contain answers, and further questions for examination use. These questions could be used in conjunction with any lower school science course.

The teachers' guide of *Assessment Questions for Integrated Science* contains detailed analysis of the questions in terms of course objectives and facility. The construction of the questions and analysis of the results is also discussed. While the book states that it is not intended to be a text on the techniques of assessment, it does provide a useful starting point for test design, since a large part of the book is devoted to the theory of assessment. The questions in the pupils' book are also reproduced, although in reduction.

While either pair of books would be useful for examination or homework, those teachers intending to design their own examinations would find *Assessment Questions for Integrated Science* of considerable help.

Dorothy Blyden, who this year's Blenheim Award for "outstanding services to children's literature" in *Cumtula* and her books (published last year by Hodder £3.95) Mrs Blyden described her own experience in using books to stimulate the development of her genetically handicapped grandchild. Her new book *Babies Need Books*, a

general guide to children and reading for all parents will be published on May 22nd (Bodley Head £4.95). A specialist bookshop and lecturer who runs a remedial reading service, Mrs Blyden has also collected stories and poems from her native New Zealand in *The Māori*, to be published later this year by Keats (£4.50).

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## Practising the answers

*Multiple Choice Questions for A-level Chemistry* by Derek Stebbins. Butterworths £2.95 408 10644 1

There are several books of objective questions in A-level chemistry on the market, but they are lacking in one of two important respects. Either the questions are not in the form actually used by examiners, or the answers given are of doubtful value. However, both of these gaps have recently been filled by the publication of *Multiple Choice Questions for A-level Chemistry*.

The book contains over 440 questions, which are deliberately planned to avoid the pitfalls of multiple-choice questions, such as the "trick" questions which are often found in other books. The questions are graded in order of difficulty and vary in type, including

multiple choice and open ended ones. The teachers' guides contain answers, and further questions for examination use. These questions could be used in conjunction with any lower school science course.

The teachers' guide of *Assessment Questions for Integrated Science* contains detailed analysis of the questions in terms of course objectives and facility. The construction of the questions and analysis of the results is also discussed. While the book states that it is not intended to be a text on the techniques of assessment, it does provide a useful starting point for test design, since a large part of the book is devoted to the theory of assessment. The questions in the pupils' book are also reproduced, although in reduction.

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## resources

## New forms for old technology

ADRIAN HOPE on Audio-Visual 80

It is perhaps ironic that, with video now accepted as an everyday industrial and educational tool, interest in slide projection is booming. Visitors to AV 80 had the opportunity to see numerous slide/tape presentations and several new and dramatic improvements were demonstrated.

Most readers of *THE TIMES* will already be familiar with basic slide/spot presentation techniques. But, as was well evidenced recently at a lecture given to London architects on recent advances in this field of technology, in many professions there is still considerable ignorance about what a synchronized slide and tape presentation can offer. It was for instance plain from questions asked that for many of the architectural audience a slide-tape show meant nothing more than the projection of a sequence of slides with a loosely synchronized music or speech soundtrack.

The modern generation of slide/tape systems relies on anything from two to several dozen slide projects, all under the synchronized remote control of a single programme recorded on tape alongside the audio soundtrack, and with the projector's functions controlled by a microprocessor or mini-computer sending the pulses. By switching slowly or rapidly between different projects, or by fading and dissolving slowly, or by superimposing the images from several projects, it is now possible to produce on screen a continually changing image of extreme clarity, brilliance and beauty.

At AV 80 arguably the most exciting slide display was presented by the British Film Clear Light (10-11 Great Newport Street, London WC2) using United States-made Star microprocessor controls, dissolve units and fifteen rapid-change Kodak Carousel slide projectors. With this equipment, Clear Light presented a demonstration which included the unique sight of a human face in close-up speaking words heard from the soundtrack, and with lip movements uncannily synchronized with the speech. For one had never previously seen lip sync attempted on a slide-tape show and the effect was quite magnificent.

Probably the most famous British name in slide-tape synchronization is Electrosonic (815 Woodhatch Road, London SE17) which markets a wide range of systems. Electrosonic now offer two new gadgets. The Electrosonic ALC is an automatic lamp changer which costs about £100 and can be fitted to the new Kodak 2020 Carousel. These projectors already make provision for two lamps which can be manually changed over when one fails. The Electrosonic ALC automatically senses a failed lamp, makes the change over mechanically and alerts the operator.

Electrosonic were also launching the Barox computer random access system for slide projectors. This is a small microprocessor unit and calculator-style keyboard which is mounted alongside a Carousel projector. Barox affords in the Carousel magazine 'code-numbered' and can be recalled by pushing the appropriate number into the keyboard. The projector simply hunts for the code, backs up to the relevant slide and forwards it to the screen. Cost of the simplest Barox system, a single projector

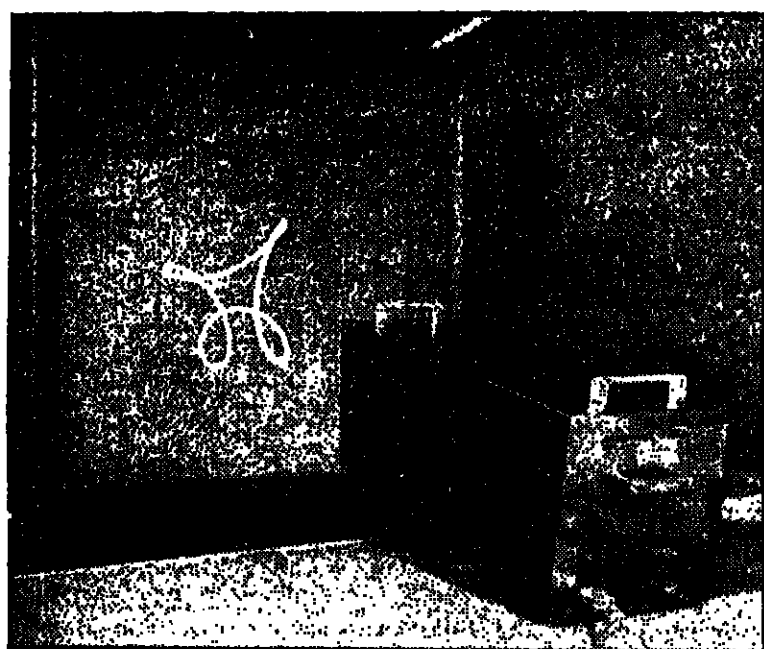
keyboard and mini-computer, is around £800.

Two companies were showing a wholly new extension of tape-slide technology, namely incorporation of a laser display alongside the slide projectors. In its 'raw' state, a laser beam is a very narrow pencil of intense red or green light (depending on the laser type) and is passed through an arrangement of mirrors, any movement in the mirrors will deflect the beam. If the mirrors are powered by electromagnetic coils in the manner of a laboratory galvanometer, then the laser beam can be made to trace out a pattern on the screen. If the trace is fast enough the pattern appears to be stationary. This is the basic of laser graphics, as for instance used at the Planetarium.

Probably the cheapest and simplest means yet of controlling a laser to produce graphics is now being offered by Sarnar Audio Visual (32 Woodstock Grove, Shepherds Bush, London W12). For about £2,000 you get a low-power laser and a computerized control system which is triggered by tape signals similar to those used for a slide/tape presentation. The Sarnar laser trace can be incorporated in an ordinary slide/tape presentation to augment the pictures on screen with laser graphics. To keep the cost down the Sarnar laser computer comes pre-programmed with a choice of over 2,000 different graphic shapes. Of these eight are pre-selected for any single presentation and then triggered on and off by simple pulse signals recorded on the tape.

A much more ambitious, and inevitably far more expensive, system has been designed by The Incredible Products Company of the United States. This, the Magic Laser System, is being marketed in the United Kingdom by Mediatech (Woodlands Place, Alport, Wembley, Middlesex). The Magic Laser system can be pre-programmed by a skilled operator to produce virtually any graphic design on the screen. The galvanometers can follow trace signals of up to 35 KHz and do this are often moving at about 200 mph.

Three control signals are necessary and these are recorded on three tracks of a four-track tape recorder. For the technically minded the con-



The Magic Laser System.

trol signals are analogue, but FM encoded. The need for digital control signals arises when artistic drawings, rather than abstract images, are to be traced on the screen. The Magic Laser system can be modified to cope with these if necessary.

At the other end of the display scale, several companies are now offering portable AV presentation units. A pair of projectors (almost always Kodak Carousels) are mounted alongside a cassette tape recorder, pulse programmer and microprocessor unit in a carrying case. Kodak themselves now offer just such a system, for around £1,500.

Schools unable to afford even the simplest AV Exotics will perhaps continue to rely on overhead projection. Here 3M have some interesting equipment which will enable teachers to produce a transparency from a printed original as easily as producing a photocopy. There are two transparency makers, which both look like white top photo-copiers. The cheapest of these, the 1645, will cost between £100 and £150 depending on source and is a dry photo system.

The more expensive unit, the M45, is automatic and produces finished overhead transparencies in four seconds. The machine, which relies on infra-red rather than visible light to make the copy, costs about £250, depending on source.

Two schools heavily committed to video, but so far deterred from editing by the high cost involved, REW (146 Charing Cross Road, London WC2) is importing a video editing machine from the Conver-



The Sarnar Audio Visual Director 24 2-tape microprocessor-based multi-media system.

## ILEA videocassettes available

by Carolyn O'Grady

Over 200 videocassette programmes originally made for London schools are now available throughout the United Kingdom and abroad. Most of them were made by the ILEA cable television service which stopped transmitting programmes to schools a year ago after a long debate on the economic justification for a local cable service.

Since then videocassette programmes have been made for distribution to London schools by the ILEA Learning Materials Service. They are being made available as an international basis following an agreement between the ILEA and the Central Film Library.

The video programmes cover a very large range of subjects. They include cartoons and magazine programmes for primary school children, material for special education, programmes illustrating scientific experiments which, at either too large or too expensive to perform in the classroom and series for adult and teacher education.

There are a number of series on community relations topics including the well-known Race for Survival, made with two groups of young West Indians who attempt to articulate a black British point of view, and *Somebody's Daughter*, a series of five programmes about the relationship between a white girl and a black boy whose baby she is expecting.

Speaking at a meeting to announce the availability of the cassettes, Leslie Ryder, ILEA's director of learning resources, said that since September 1979, the Learning Materials Service had distributed about 6,000 cassettes from the BBC and other sources to 40 and 45,000 programmes.

The service was now producing about 150 programmes a year from one colour studio. The 200 recordings which the CFL had on its catalogue was about one-third of the programmes collected. But the CFL would continue to distribute programmes considered suitable for a wider audience as they became available.

Since September ILEA schools have had to pay for their own television sets, the maintenance of those sets and cassettes. At the time most schools were equipped with black and white sets which were coming to the end of their useful life. Eighty per cent of ILEA schools, said Mr Ryder, now bought colour sets and the video recorder.

The success of the venture with the CFL, he added, would depend on teachers' willingness to pay for the purchase or hire of the tapes. Purchase prices for one cassette (three to four programmes) vary between £35 and £45, depending on the video format (VHS, Betamax, U-matic or Philips VCR) and the cost for one complete term between £15 and £19.

ILEA schools at present pay substantially less than this and do not have to send money as accounts are credited or debited within the ILEA accounting system.

The CFL are counting on a large number of overseas sales and say that there has been a lot of interest in the programmes from abroad.

gence Corporation of the United States. At £2,330 this is probably the cheapest video editor yet available. It enables two video recorders to be locked together for cross-dubbing pictures and sound from one machine to the other without picture breakup. The Convergence ECS 90 can be interfaced (using normal remote control sockets) with a U-format, Betamax or VHS format machine which does not unthread the tape in the fast forward or rewind modes. While the tape remains locked round the video drum the control track is operative and maintains sync. A joystick control enables the operator to 'rock and roll' the two tapes backwards and forwards until a pre-selected edit point is exactly reached.

Brief mention must also be made of the textext and videatex demonstration given by Rainbow Video (Perry Gardens, Gosport) using a Mitachi video projector. Anyone looking closely at this demonstration must have soon realized that the signals were not arriving 'off air' from the BBC or any other source, but from the Post Office. The signals were in fact arriving from a completely conventional audio cassette tape recorder. There is no real problem in recording videatex signals off a telephone line onto an audio cassette recorder, for later replay through a videatex receiver, because the raw videatex signals are simply coded sound signals of audible frequency. But it is more of a problem to record off-air because these are arriving at a very high frequency, piggy-back on television picture signals. Because of compromises adopted in all domestic videocassette recorders, a video recording of a television programme using any teletext signals during the recording process. Of course, teletext signals arriving off-air are of far too high a frequency to record on an ordinary audio cassette.

So how were Rainbow replaying teletext from an audio cassette? They would say only that the system on display at Wembley had been designed with the aid of videatex data inventor Sam Fedida and that it is still secret. The next generation of teletext decoders from several manufacturers will start to offer a special socket for just this purpose. This socket feeds off each page of the teletext decoder memory at sufficiently slow speed for an audio recorder to tape it. To replay the taped page, the audio recorder simply feeds its recording back into the decoder memory at similarly slow speed.

Two recent slide packs from the Centre for World Development, each containing 20 slides and teaching notes, are titled *A School in Kenya* and *Our Cup of Tea*. *A School in Kenya*, compiled by Alan Pocock, describes a Kenyan primary school.

Primary education in Kenya continues until the age of 13 or 14. The notes demonstrate the difference in educational opportunity between the developed and developing countries and give general information about development in Kenya itself. Notes are then given on each slide, and there is a section of supplementary notes for teachers.

The pack illustrates the shortage of basic teaching resources taken for granted in British schools. Kenyan pupils make even their own desks in school.

Our Cup of Tea, also contains 20 slides, is about tea plantations in Sri Lanka and the international tea trade. Compiled by Hugh Starkey and Margaret Haynes, its accompanying booklet contains teaching notes and information on each slide. Each pack costs £4 plus 60p p.p. by air. The packs are available from the Centre at 128 Buckingham Palace Road, London, SW1.

## Introductory pieces

Brian Hill on schools language series

Fewer language teaching series are broadcast in the summer term, but there are five in the next two months which are worthwhile.

*Inside Germany* (Mondays 10.45 VHF 4), for instance, has eight new programmes which aim to provide background information on the Federal Republic, largely in English. Many of the programmes use recorded interviews with German children introducing their country to their English counterparts.

The new radiovision programme *A Visit to Offenbach* (May 12) is based on a study tour by pupils from Rushmore School in Sheffield and looks particularly good value. *Inside Germany* is accompanied by useful teachers' notes and pupils' notes. Some of the exercises are suitable for low achievers, others, notably the crosswords, require a rather more sophisticated level of language.

Another new series is *Drama in a Day* (Wednesdays, 9.30, VHF 4). Like its companion *An Introduction to Education*, *Russian Language and People*, it was conceived in the first Afghan war when thousands of Britons were expected to be learning Russian in anticipation of the Olympic Games. *Zdravstvuyte* is primarily designed for intermediate work, with pupils at accelerated O level courses, but would seem to be just as valuable for students in further and higher education.

A magazine format contains dramatizations, straight readings, poetry readings. The lack of authentic insights provided in the series by real live Russians might be missed, but I do like the device of using familiar stories such as *Alice in Wonderland* or *Robinson Crusoe*. The teachers' notes are invaluable, since they provide much more than the standard occasionally misleading summary of contents.

On television, ITV are broadcasting *At Travail* (Thursdays, 10.26) a series for older teenagers who might want to work in France. However, the level of language suggests the target audience is coming from universities or polytechnics, and the themes are beyond the experience of most teenagers.

The programmes are attractively filmed and offer imaginative suggestions; the teachers' notes carry useful addresses but are of little help for understanding the content, which is a pity since this might have made the programmes more accessible to a wider, younger audience.

A recent programme was about life in a 'Café de l'Académie' theme, picked up in *Solitude* (Thursdays, 10.45 VHF 4). This series is about as modular as a series could be, providing within each broadcast two levels of language, and within each level two or three different sequences.

Some of the dialogue seems unnatural at times, but certain motivating devices such as sound-effect games work well. These involve the pupils more actively in the broadcast, and with each level two or three different sequences.

Members of the Dante Alighieri Society will be pleased to see that *Appuntamenti in Italia* (Wednesdays, 14.15, Fridays, 9.05, BBC-1) and its companion series *Encounter in Italy* (Mondays 11.40, Tuesdays, 14.14, BBC-1) are being repeated this term. The lingering and sympathetic picture of Italy portrayed in an earlier series, *The Italian Way*, has been regarded to fit in with the needs of Italian learners.

The voice-over dialogues in Italian are appropriate for a broad range of learners, even after A level, and a script is published in the teachers' notes, but the subject matter remains very distant from the interests of most pupils.

## Fagin resuscitated

Frances Farrer reviews children's drama series

A cardinal rule of children's literature, that the main characters shall be children and that they shall affect the action, is being observed throughout the current television children's drama.

Beyond that, you might think there would be enormous scope for extraordinary adventures, but at the moment the series resemble one another to a startling degree. They are concerned with kids who are hindered by many adults and helped by a few, but who bravely get on and do what they must do, which is always something jolly worthwhile.

*The Further Adventures of Oliver Twist* (ATV, Sundays, 5 pm) is one of the most obvious examples of the genre. It has a lot going for it, including an impenetrable plot and a reek of foreign sales, yet occasionally it works quite well.

Fagin and the Dodger have been resuscitated and Mr Brownlow has been dragged and incarcerated. The entire underworld is after Oliver. Mr Grimwig still threatens to eat his head (which follows by striking his white curls and releasing clouds of wig powder), and Oliver is as pretty, as blonde, and as wet as in the more recent big movie.

ATV boast 'an extension of the novel as Dickens himself would probably have visualised it', but it seems unlikely that even Dickens would have asked his public to swallow so many reformed characters, double-double-crosses and bits of pretty marauding. There are also uncharacteristic such as gothic villain 'makin' hats. Dickens' skill with the cliff-hanger and his concern with social conditions have not survived.

Despite all this, and it is a great deal, *Oliver's Adventures* are sometimes quite fun. Many of the characters still have Dickensian colour and force, several still say 'wot' for 'what', as in 'werry

wicious', and the rapport between Oliver and the Dodger is at least as good as in the movie.

The BBC's Sunday children's slot is the province of the adult drama department, which seems to show a preference for costume pieces and occasionally for inappropriate, if pleasant, productions like *The History of Mr Puffy*, shot apparently in slow motion through a filter.

*The Swiss of the Curtain* (BBC) finished last Sunday. It was set somewhere in the late 1940s/early 1950s, among the comfortable middle-classes. In it, the Bell children form a theatre company and become increasingly stage-struck, which infuriates their stiff-necked father and maddens the snobbish Mrs Porter-Smith.

A common complaint is that the children-as-heroes pattern can be mimicked as adults-as-heroes. In series such as *The Famous Five* (Southern) and *Oliver Twist*, the adult bander is a genuine criminal with a yellow bow tie or villainous diction, but in *The Sign of the Cross*, the banders are the kids' parents and other pillars of society. It is not until nearly the end of the series that we discover that Mr Bell's unfathomable appointment to the theatre company stems from his discovery, before their wedding, that Mrs Bell cared more for her ballet career than for him.

Thames have been repeating *The Boy Merlin* (Fridays, 4.15 pm) which is much stronger on destiny than on self-assertion. Merlin is being brought up by an honest blacksmith and his wife, who are full of commonplace concerns, but is imbuing magic from his foster-grandmother, a potent old seer who sits by the fire.

Spontaneously there are Welsh accents, tips to send the King, anti-influences and even magic. With the exceptions of Ian Rowlands (Merlin) and Rachel Thomas (grandmother), it is a waste of time.

## Briefings

Radio and tv

*Is There Life After School?* (Monday, 10.10 BBC 1)  
Four programmes on efforts to bridge the gap between school and work.

For schools

*My World* (Monday, 9.30 ITV)  
Covering 'Surfaces' explores some problems of wallpapering, pottery-making and bandaging, for infants and lower juniors.

*Exploration Earth* (Monday, 14.00 VHF 4)  
A unit on 'School Talk' to introduce 10 to 12-year-olds to geographical concepts.

*Going to Work* (Monday, 14.40, BBC 1)  
'Overcoming Handicaps' features the success of some young people who have coped with various disabilities.

*Television Club* (Tuesday, 11.17, Thursday, 14.40 BBC 1)  
Tod Moulton shows 12 to 14-year-olds how to enjoy a film visit by taking simple safety precautions.

*Look Around* (Tuesday, 11.22 TV)  
Ten to 12-year-olds look at the development of road transport.

*Days that made History: Twentieth Century* (Tuesday, 14.30 VHF 4)  
Five programmes on British social and economic history, based on events between 1926 and 1974. This week, 'The General Strike', *History in Evidence* (Wednesday, 9.05 VHF 4).

Eleven to 14-year-olds study Brunel.  
*Music Round* (Thursday, 11.05 ITV)

'Music for Fling' traces the development of the use of music in the cinema. *Exploring Science* (Friday, 11.40 BBC 1)

Eleven to 13-year-olds investigate 'Electricity'.  
*Living Language* (Thursday, 14.40 VHF 4)

A three-part story to encourage creative imagination in 9 to 11-year-olds—'The Day the Last Dinosaurs Died', by David Pownall.

## BBC Annual Programme Radio and Television for Schools and Colleges New Series 1980/81

Radio	Age 6 and over
The Song Tree	Age 6 and over
Maths - with a Story!	Age 8-10
Living Through History	Age 11-14
Soundtrack	Age 11-14
Home or Away	Age 13-14
Music Projects	Age 13-16
Case Book 81	Age 13-16
Life Time	Age 13-17
O-Level Religious Education	Age 14+
Teenage Playhouse	Age 14-17
Multi-Cultural Resources	Age 14-17
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## Kenyan case-study

Two recent slide packs from the Centre for World Development, each containing 20 slides and teaching notes, are titled *A School in Kenya* and *Our Cup of Tea*. *A School in Kenya*, compiled by Alan Pocock, describes a Kenyan primary school.

Primary education in Kenya continues until the age of 13 or 14. The notes demonstrate the difference in educational opportunity between the developed and developing countries and give general information about development in Kenya itself. Notes are then given on each slide, and there is a section of supplementary notes for teachers.

The pack illustrates the shortage of basic teaching resources taken for granted in British schools. Kenyan pupils make even their own desks in school.

Our Cup of Tea, also contains 20 slides, is about tea plantations in Sri Lanka and the international tea trade. Compiled by Hugh Starkey and Margaret Haynes, its accompanying booklet contains teaching notes and information on each slide. Each pack costs £4 plus 60p p.p. by air. The packs are available from the Centre at 128 Buckingham Palace Road, London, SW1.

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# SOMETHING FOR EVERYONE

Try the sofa over there, Fred," said Wilma. Poor old Fred hadn't worked so hard in years.

The previous day had been so exhausting enough, trying all the furniture into the home of the dream house – a three storey Victorian terrace house. But at least there had been an end to moving in.

There now seemed to be an infinite number of ways that each piece of furniture could be arranged in the corner of the room, and Wilma was determined to try them all. The last straw was when Fred had carved the cabinet up to the eaves on the top floor and it wouldn't fit. The inevitable – exasperation surprised even Fred.

"Wilma," he spluttered, "there must be an easier way."

This situation is one of many used to stress the relevance of mathematics to everyday life in the Open Schools across the Curriculum. The course title is also the main theme of this Mathematics Extra and in this article I want to explore what mathematics across the curriculum might mean.

The recent primary and secondary surveys by HM Inspectorate suggest that, while basic skills are getting plenty of attention in the classroom, children are not learning to apply the mathematics they are learning even to simple situations. It seems particularly appropriate, therefore, that much of this Extra is focused on why and how maths could be used in other subjects.

Let me begin by drawing a parallel with the language across the curriculum movement. Not long ago many teachers looked on their responsibility towards developing language across the curriculum as being that of correcting spelling and making sure that the children did

the known things across the curriculum ought to mean more than putting the children right when they get a sum wrong or having a school policy on always doing subtraction by equal additions.

But mathematics is to have a role across the curriculum. It should only be because of the extra power that it can bring to the understanding of other subjects.

At one level this extra power has long been recognised. The learning of science relies on children being at ease with a number of mathematical techniques. Indeed, most subject areas are making increasing use of specific mathematical techniques – analysis, data, statistics, relationships or categorise phenomena. But the level of use here is that of borrowing a technique, without, I fear, much understanding on the part of children as to why this method rather than that, might be relevant to the problem on hand. In fact, far from explaining, mathematics used in this way is more likely to mystify. Nowhere is this more true than in the use of statistical ideas and techniques (see the article in this Extra by Peter Holmes).

There is, however, an alternative way of thinking about why it might be worth using mathematics in other subjects, which is well explained by seeing another parallel with this time with adult life.

Have another look at the example I began with. It is not difficult to see that Fred's immediate problem could be solved by measuring both the cabinet and the eaves (using only the most basic calculation skills covered so thoroughly in primary schools). But from the sound of things, Fred and Wilma

Identify which rooms and pieces of furniture needed to be measured.  
Make a rough diagram and record on it the key measurements.  
Draw a scale drawing of the house and models of the furniture.  
That is, using a scale drawing to involve them in a process that encompasses far more than just techniques of drawing to scale.  
Two aspects of this example important for the classroom. First, the context of house-moving provides Fred and Wilma with a new purpose for using mathematics. A mathematical approach to a problem looks promising, so they embark on it with the understanding that your interest in what use mathematics can make in other subjects you get out of the situation. Many teachers, even HM Inspectors, gully at times of giving the impression that maths across the curriculum is just a chance to give some really interesting maths (which cutting much ice with other teachers). On the other hand, there are many opportunities for mathematics across the curriculum (as described by Peter Capper, Sid Hargrave).

Secondly, making and using a scale drawing is a process in which the technique of drawing to scale is embedded. The growing understanding of mathematical models as a process suggests that there are a number of stages involved in using mathematics. (See the article in this Extra by Peter Holmes for more maths you need to have the confidence to follow all stages of a process.)

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extra

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At the Dorothy Purcell Primary School, Walsall, a group of children work together on a school magazine project.

## STATISTICS IN YOUR WORLD

By Peter Holmes, Director of the Schools Council Project on Statistical Education

This Schools Council project was set up in October, 1975, to assess the current situation in statistical education for 11 to 16-year-old pupils, relate this to the position of statistics outside schools, produce teaching materials and to consider the implications for both initial and in-service training of teachers. An account of the early work of the project appeared in this journal in 1976.

Statistics is a practical subject devoted to the obtaining and processing of data so as to be able to draw inferences, make estimates, and to make other statements which often extend beyond the data. Data

arise in many contexts. Statistics is an interesting, relevant and practical subject which is widely used in our society. Since one of the general purposes of education of pupils aged 11 to 16 is to prepare them for the world in which they have to live, one component of their education should be statistical.

Even a cursory glance at newspapers and journals indicates the breadth and type of statistical thinking the citizen of today is expected to cope with. Behind many references to wage claims there lies the idea of an index to measure change; political decisions such as whether or not to make the

being called a bar chart in one subject and a histogram in another and with the pupil given different standards of statistical technique and definition in two different subjects.

A deeper problem is that the statistical work is often largely uncoordinated and greater levels of statistical expertise are required in one subject than in another. Occasionally, the depth of statistical understanding required may not be recognized and the necessity for appropriate background experience not appreciated. An example of this occurs in some geography courses which require the calculation and use of rank correlation coefficients with perhaps only a limited background of work on distributions and variability. The opposite problem also occurs with a subject teacher not referring to simple statistical techniques within the scope of the pupils' understanding and using them effectively to increase insight into the user subject.

Wherever possible genuine and up to date data have been used so that any inferences drawn have a real meaning.

The general aims behind the teaching units are that through them children should come to appreciate both the breadth of statistical applications and the power and limitations of statistical thinking. A total of 27 different units were written and tested with children of a wide range of ability in 55 trial schools throughout the country. It was only after evaluation, revision and retesting that the final versions were prepared.

## SKILL GETTING AND SKILL USING

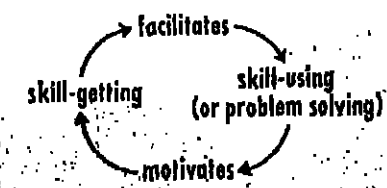
By Ann Floyed

One of the perennial problems of the mathematics educator is the difficulty which children often have in making use of such skills as they possess in order to solve problems.

Recent evidence of this comes from many sources, such as the Schools Council survey *Mathematics and the 10-year-old*, and the APU mathematics report. Both of these reports are concerned with children's performance in situations which they have been told are mathematical. When they have not been so told, as in the science or geography classroom, for example, or in their living outside school, the chances of their seeing the relevance of their mathematical skills and then putting them to effective use are even less. It is as if the things that they learn are conceived of as being completely unrelated to each other, so that the knowledge they possess is fragmented and compartmentalized.

This is not true of all children, but it is true of many. Yet one of the principal reasons for teaching mathematics to all our schoolchildren rather than confining it to the 'maths' proportion who might later choose to specialize in it is this very potential as a useful tool in many situations they will encounter in 'adult life'. If this potential is to be realized, we need to 'make sure' that children see mathematics as a helpful and productive approach in many practical contexts rather than as a collection of arbitrary procedures that are only relevant in mathematics lessons. Furthermore, it is probable that when children do see it in the former way they are more strongly motivated to acquire the necessary skills.

In the Open University course 'Mathematics across the curriculum' the relationship between acquiring (or 'getting') skills and putting them to good use is summarized in the following diagram:



example above. Hence the teacher has to find ways of fostering both modelling and manipulative skills, involving both of these if it is to genuinely facilitate skill using.

The lower link in the diagram expresses the belief that wanting to find an answer to a problem is a considerable incentive to acquire the relevant skills. Brian is a good example of this. Brian's class was engaged in a campaign to convince the local education authority that they should reinstate the lollipop machine in which they might eat useful. In other words he had improved both his manipulative and his modelling skills.

Mathematics teaching must therefore take account of both the links in the diagram. It must find a way of capitalizing upon the motivating power of interesting problems and at the same time ensuring that the skills appropriate to a solution of such problems are acquired.

At first sight there may appear to be an insuperable difficulty here, because it could easily be argued that the relevant skills have to be taught first, and that the problem solving should then be used as an application thereof. The fallacy in this argument is that it assumes that the only valuable solution to a problem is the one that is the neatest, and most elegant of available solutions. I would argue that the process of constructing some sort of solution, however inelegant can be a powerful learning experience in itself, and that it can at one and the same time be taking the learner along the path to more sophisticated procedures and also fostering his interest in the whole enterprise.

of using percentages as a means of comparing the two surveys, and Brian overheard their discussion though he couldn't understand it. However he was so keen to do the comparisons for himself, because he really cared about his outcome, that he sought assistance with the self-same percentages that had previously been both uninteresting and unintelligible.

What is more, thanks to this strong motivation he really came to understand percentages and produced a comparison between the two sets of data that was satisfactory and convincing both to him and everyone else involved. Furthermore, through his involvement in this problem he had not only increased his grasp of what percentages are and how they can be calculated, but also acquired more of a feeling for the kind of situations in which they might be useful. In other words he had improved both his manipulative and his modelling skills.

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Let me illustrate what I mean in relation to the word problem mentioned earlier. In this context the argument that necessary skills must first be acquired would mean

time (seconds)	number of children	1st survey	2nd survey
1	0	0	0
2	2	5	5
3	4	4	4
4	4	3	3
5	5	7	7

To compare the numbers in the two surveys, the children soon recognized that they could not simply look at the actual numbers in the two columns, because there had been far more children in the second survey than in the first. Some of Brian's classmates thought

Let me illustrate what I mean in relation to the word problem mentioned earlier. In this context the argument that necessary skills must first be acquired would mean

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"Something for everyone" continued and (for the learner) repeated experience of the full cycle will, I believe, lead to the attitude that mathematical thinking really does have something to offer.

To summarize, I would suggest that mathematics across the curriculum means 'helping children to identify their purposes (this should help them to see why they need to use mathematics) and so structuring lessons that children experience the full cycle of mathematical modelling (which helps them to see how to use mathematics). Both stages are present: then mathematics will be used across the curriculum only because of the extra power it can bring to the understanding of other subjects.

I would like to end with an example from the classroom. A teacher who was working on the development of the Open University course, reported on her work with a class of 8-year-olds. She began by establishing a 'class purpose': 'In a topic lesson we had discussed Stone Age man's needs and the manner in which he lived. There were various key words on the board such as hut, water, animals, etc. The exercise for the children was to describe a typical New Stone Age village.'

In this lesson, the large majority of the children simply wrote about the appearance of the village. Only Jonathan asked if he could draw a plan. In doing this he went through the following process:

- Identify the problem elements (which things needed to be included in the village);
  - Sketch out the links between them (water should run near to the huts, animals should be enclosed in pens);
  - Construct a suitable representation (draw a plan of the village);
  - Interpret (write accompanying notes).
- These steps are those that had been identified in the course for the

process of making sense of a spatial distribution and they are the same as those suggested for Fred and Wilma above. At the end of the lesson, the class all agreed that Jonathan's plan was more explicit than their written pieces. The teacher went on to stress the benefit of working in this way.

"By pointing out the possibilities and encouraging children to use diagrams in their problems, I have found that many are now far from hesitant about using diagrams, and in fact enjoy it. If children of this age can be encouraged in this way, I feel that the graphicacy skills will naturally follow."

It seems as if this approach to mathematics across the curriculum has something in it for everybody.

John Baker is a lecturer in mathematics at the Open University and Chairman of their Mathematics Education Group.

## Structured Mathematics

A.J. Fletcher  
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extra

## PROBLEM SOLVING IN THE JUNIOR SCHOOL

\* Since the problem had to be real to the children then clearly the children had to be asked.

By Sid Hargrave

In the summer term the Walsall Education Authority and the Open University ran a joint in-service course: "Problem Solving in the Junior School" as a pilot study for the Open University "Mathematics Across the Curriculum Course". The course was comprised of three tutorials and a two-day residential school, the former being tutored by the Walsall Mathematics/Science Unit staff and the latter by the Open University Course Team.

The Real Problem Solving Study occupies what might be described as middle ground, being neither strictly a subject area nor a readily definable piece of mathematical content. It is concerned essentially with general thinking processes; namely: planning — measuring, making sense of space; seeking out relationships; taking decisions; representing for understanding; and aims to illustrate, in the process, that mathematics has the power to explain. Thinking skills are, of course, needed right across the curriculum and not limited by subject boundaries.

Following the two-day residential school the 28 participants, all of whom were head teachers, deputies or postholders, and in most cases attending as a "pair" from a school, felt enthusiastic and stimulated. It was evident that Real Problem Solving possessed significant potential for nurturing investigative skills. General language development, particularly oracy and social awareness. However, considerable doubt was expressed in relation to the mathematical possibilities such a project might yield

and the likelihood of genuine problems being identified.

The concern about problems was easily resolved. Since the problem had to be real to the children then clearly the children had to be asked. One head teacher consulted a class of fourth year children and they provided 24 problems, all of which satisfied criteria for judging a real problem:

- It should have immediate, practical effects on children's lives.
- It should lead to some improvement of the situation by children, in other words, it is actionable.
- It should have no known solution.
- It should require children to use their own ideas for solving the problem.

● Is it big enough to involve the whole class over a period?

The problems tackled were varied and included the following topics: planning, visits, school gardens, safety, tuckshops, use of space in the classroom, playtime, cloakroom overcrowding, school meals, producing magazines, safe places to play, litter, sports day, walking to bus/games fields, etc.

Throughout the projects the teachers and children used the acronym PROBLEMS as a device to tackle the messiness of "real problems".

- Pose the problem.
- Refine into areas of investigation.
- Outline the questions to ask.
- Bring the right data home.
- Look for solutions.
- Establish recommendations.
- Make them happen.
- So what next?

Each stage of the acronym had a series of self-organizing questions, for example, "outline the questions to ask" required the children to consider: What question do we want to ask? Would the answer help us to solve the problem? Would we be able to find the answer? This process, of course, is the process we, as adults, use when tackling a problem.

In order to assess the mathematical potential it would perhaps be beneficial to focus on two of the projects.

The first project concerned justifying the continued existence of the school tuckshop. The tuckshop had become time consuming, for staff, created litter in the school grounds and yielded a return not commensurate with the effort involved. An initial "brainstorming" session was held, where the problem was posed, and then refined into areas of investigation. In all, eight areas were identified and children heavered away in small groups investigating aspects such as:

- How many children use the tuck shop?
- Number and variety of articles sold.
- Likes and dislikes.
- Storage and stock.
- Queueing time.
- Spending habits.
- Litter problem.
- Staff time commitment.

Interaction between the whole class and small groups was vital, not only in exchanging ideas and information, but in order for the groups to consider how their work contributed to solving the problem and to decide what further investigations were needed.

By the time that the children were ready to bring the data home the mathematics really began to emerge. In analysing and interpreting statistics the children were found to be sorting, classifying, counting and using the four rules of number. Pictorial representation was much in evidence in the form of block graphs, networks and plans.

The children were using mathematics with enthusiasm. Groups were wandering round the school measuring stockrooms, cupboards and estimating areas for storage, others were huddled around calculators, and mathematical graffiti appeared all over the blackboard. I remember well one 10-year-old saying: "I enjoy being my mind instead of a book."

The children were not only consolidating and reinforcing skills already learnt but at times found it necessary to acquire new skills in order to accomplish their objectives. The group working on likes and dislikes, for instance, found that their original plan of surveying every child in the school was unworkable. They simply did not have enough time, and additionally the infants were found to be quite unreliable when it came to a show of hands. They thus were introduced to a concept of sampling and were able to complete their work satisfactorily. Other groups needed to understand percentages, averages, and ratios in order to complete their tasks. The children were eager to learn from Maths Masters: the teachers were happy to help the children slightly motivated towards learning new mathematical concepts.

Recommendations made by the children showing ways of improving the school, reducing queueing time and increasing tuckshop grounds, led to the renovation of the tuckshop. The second problem was concerned with making playtime more enjoyable. This was a somewhat surprising outcome of project but the children's "brainstorming" strategy showed that anytime would be occasions of conflict and disagreement.

The school had a large and a small playground. Two climbing frames and a hop scotch marking were placed in the large playground, the other games were placed in the small playground. The small playground was rather close to the gardens of neighbouring houses.

Some groups of children were asked to draw a plan of the school grounds. What was wrong with the



Sid Hargrave in consultation with a pupil in a Walsall school.

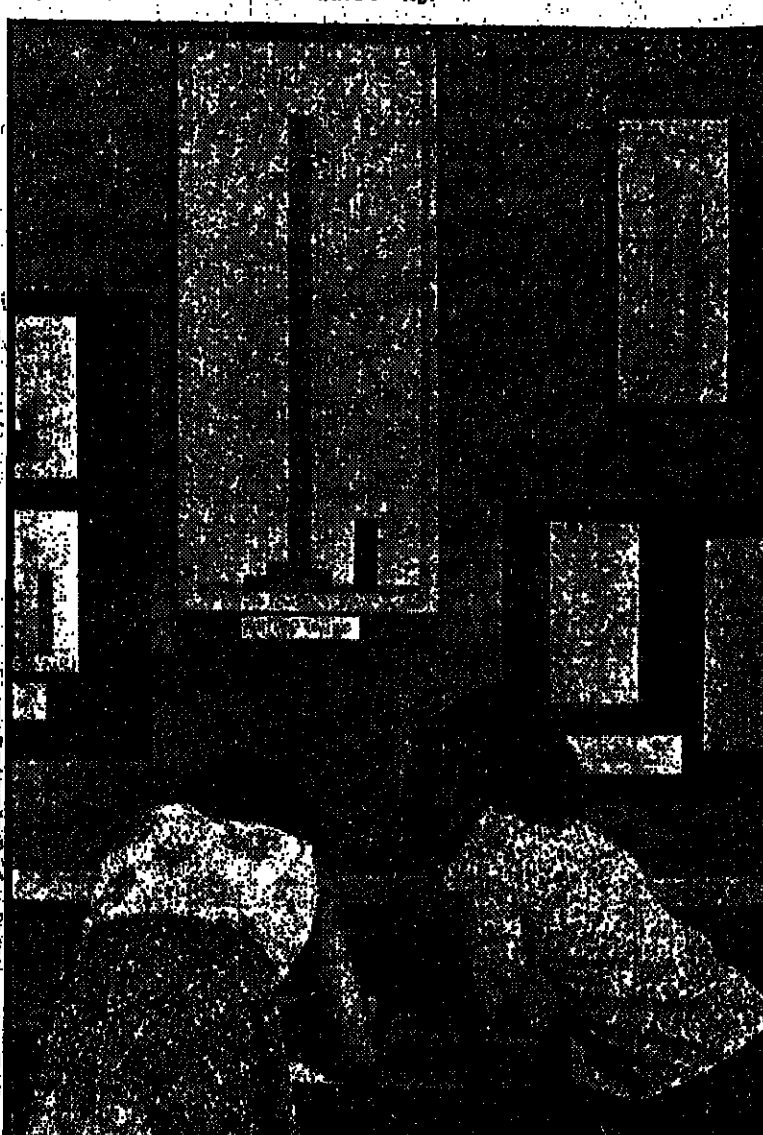
large playground? What was wrong with the small playground? Making plans of existing and improved areas. Surveying opinions as to needs.

The children designed a questionnaire, something they had not done before, and collected relevant information. Once again the skill of getting skill using cycle was seen to be operating. The children were consolidating and reinforcing such skills as sorting, classifying, estimating and measuring, while the problem also demanded development of new skills such as averaging, scale drawing and working out volume.

The real problem solving projects more than anything else showed that children were able to grasp the relevance of what they were doing and this indeed seems to me to be the strength of this approach.

The recommendations, all of which the children were allowed to action, were illuminating. The two climbing frames were moved to a grassed area adjacent to the small playground. Ball games were restricted to the large playground now free of obstacles. The children

Sid Hargrave is Advisory Head Teacher for Primary Mathematics, Science, Walsall Education Authority.



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## extra THE VIEW FROM INDUSTRY

'One wonders how the reported lack of skills is really lack of ability to use knowledge outside its usual context,' writes Peter Cofker

As a member of a number of educational committees I have taken part in several debates on the requirements of industry, especially the mathematical skills expected in young employees. My contacts with teachers through attending subject association meetings, with my own company's schoolteacher fellows and others have given me many insights into the problems within schools. The combination of these experiences has enabled me to formulate views, which are necessarily personal and may not correspond with those of my company or of the other bodies which I represent.

It has often been stated that employers require their recruits to be:

- **Literate:** To be literate implies the ability to be able to read instructions, in order to carry them out correctly, and to be able to write reports on what has been done.

- **Numerate:** There has been much discussion recently about numeracy, but many 'literate' comments to ability in the four rules of arithmetic. Indeed many tests examine solely this element, although it is far more important for there to be a good understanding of when to use these rules and how to apply them to everyday problems.

- **Trainable:** The rapid developments in technology require all employees to be flexible and capable of being retrained for new jobs in the future.

- **Able to communicate and work with others:** In employment, the majority of workers do not operate alone, but work in groups. There must be communication between the members of the group and this implies the understanding of the language used. Some industries have their own peculiar jargon or terminology and this must be learnt.

- **Willing to take responsibility:** Even the lowest worker is expected to take decisions, to act confidently and to abide by the consequences of that action.

One asks whether the present system of education and examination prepares the pupils to meet these criteria. Each subject is contained within its closed box and there have been several cases of pupils' unable or unwilling to

transfer knowledge from one subject to be used within another. One wonders how the reported lack of skills is really lack of ability to use knowledge outside its usual context.

Turning specifically to the subject of mathematics, I would like to see a realistic illustration of its application to realistic problems. These may be from any part of adult life, as soon as the pupil is capable of understanding the context and, possibly, from other subjects in school. At early stages the context may be from the pupil's own world, and some excellent examples are included in the material of the Open University PME 233 Course.

Suitable resources for this sort of problem should be published by the Working Mathematics Group. These 50, volunteer teachers, half teachers and half from the 'world of work' have produced modules on living with interest, life assurance, the geometry of the telephone pole, dredging a harbour, designing a yacht and minimising transport costs to mention just a few.

Immediately one can hear the cries that the examination syllabus is already too full and that no time exists for deviation, no matter in how good a cause!

This leads me to query the present examination system. Because of the demands of the universities, the academic in nature, I do not object to this as there is a need to identify the academically bright who will benefit from a university education. However, one still asks whether the training for these suppresses the lateral thinker, who thus is prevented from becoming the engineer or applied scientist so badly required today.

An opportunity to move away from 'academic' assessments 'was afforded by the creation of the CSE examinations. Unfortunately, the teachers involved had themselves experienced only 'academic' style tests and so the majority of CSE papers are mirror images of the GCSE. It is feared that the merging of CSE and GCE will perpetuate this trend.

To meet the requirements already stated, teachers need to be encouraged to involve their classes

in group discussions of open-ended problems. Some teachers may feel so insecure in their subject that they are afraid to embark upon such a course in case they demonstrate their own ignorance. On the contrary I know excellent teachers who are only too willing to embark upon discoveries with their pupils to the mutual satisfaction of all. In June 1979, the Design Council published an excellent document *Design Education at Secondary Level*. In this they state, a design course should:

- foster creativity and encourage initiative;
- encourage an approach that combines synthesis and analysis in the solution of real problems; impart a knowledge of the behaviour of the materials or systems elements and the production processes involved;
- involve design, integration and application of knowledge obtained from other subjects which the pupil then sees to be relevant in design;
- involve the use of models, whether drawing, sketching, construction or mathematical, as a means for expressing and testing ideas;
- provide an opportunity for an activity that involves not only thinking about design, but making and testing a solution;
- require an evaluation of what has been achieved;
- require communication in written or graphic form.

This shows how design projects could incorporate topics from several subjects, including mathematics, physics, properties of materials, aesthetics, and, even require research into history or geography. This type of work need not be confined to design. I would very much like to see work done by groups of, say, four children on such lines in which each student could make a contribution. Discussion, access to resources, to consultants and other resources would be encouraged.

Each student would be required to write a detailed report on the work done, concentrating upon their own contribution. In addition to the written report, and the finished product, each would be required to contribute to a verbal exposition of the work done. Both written and presentations should be assessed by representatives of employment at the educationalists.

I greatly favour assessment by projects and excellent examples are afforded by the television competitions and others. The Operational Research Society has an annual competition for schools for the best 'management science' project. These all demonstrate what pupils can achieve given a suitable challenge. The difficulty is finding the subject matter for the study. To this, and I would like to suggest, that suitable topics may be found by studying the operations within small local industries.

Initial contacts should be made by the teacher, and the possibilities researched with the firm. To assist in this some assistance may be required, some experts from sympathetic larger firms. These all demonstrate what pupils can achieve given a suitable challenge. The difficulty is finding the subject matter for the study. To this, and I would like to suggest, that suitable topics may be found by studying the operations within small local industries.

If these styles of testing become an element in our examination system, I am sure the barriers between subjects will be lowered and there will be much more teaching across the curriculum. This can only benefit the creation of the lateral thinker, the entrepreneur and inventor; that are required to return this nation to its place among the leaders of the world. I am sure that the natural way exists and with the 'growing' cooperation between education and employment this can be developed successfully.

P. B. Cofker is manager of The Education Division, British Petroleum Co. Ltd.

## extra USING OUR MATHEMATICS

• "ALRIGHT A.B. - GET YOUR CALCULATORS OUT, FORMULATE A MODEL AND LETS HAVE SOME ANALYTICAL THOUGHT - I'VE JUST BEEN SACKED!"

We spend a lot of time in school learning maths but most of us use hardly anything we learnt after primary school in our daily life or work. Could we do better? asks Hugh Burkhardt

Mathematics is well known to be a powerful aid in solving problems—putting a man on the moon, getting pollution out of the Thames, making a casino pay, working out a rota for emptying ditches, designing a television set or constructing a school timetable.

In these and a myriad of other challenging problems, mathematics provides a language in which they can be clearly expressed, allowing the construction of mathematical 'models' which mirror the essence of the situation. The model can then be studied relatively easily and cheaply, and developed to provide insight which leads to better decisions—and to provide arguments to justify those decisions.

Such is the power of mathematics—and yet most children will not use any of it, mathematics they learn in secondary school to help them tackle problems of content to them; in their adult life or work.

When they face 'real' problems, such as 'I can't do my homework because I keep on watching television', or 'Should I get a motor bike?', it is unlikely to occur to them to turn to maths, or the mathematics teacher, for help.

This is not surprising. Real problems like these do not look at all like the neat, artificial questions we face at school and they require a wider range of skills, including progress. Mathematics is only part of the toolkit and you must learn how to use it, which is not all that easy.

Is the present situation inevitable? Is real problem solving too hard? Must the thousands of hours which each child spends in studying mathematics be justified only by 'some' generalisations about 'training the mind' and by the aesthetic fascination of the subject, which many children fail to get much satisfaction from?

The answer to these questions happily seems to be 'no'. Ways of helping children to learn to tackle effectively problems of concern to them have been developed. One approach is described in this issue by John Baker and by Sid Hare: 'I want to look at the essential ingredients, and at some of the problems they present to some teachers, in the form of the following "suggestions to a teacher" who might like to try them.

Choose realistic situations that the pupils would like to understand—as far as possible they should be action problems, that is ones that affect decisions they will take in their everyday lives. You may have some good ideas (dinner?) but if you ask each child to write down anonymously something they have been concerned about today, you will get a rich store to choose from.

Start the problem class by giving the pupils a choice of 'problems' to study, and let them play the 'consultant' role, studying the problem—and then offering coherent advice. There are up right answers, though there are wrong ones, and the criterion of success is the quality of the advice and the argument justifying it. The aim is practical pay-off.

Keep the model and the mathematics simple. At first, choose a situation which is familiar, one the pupils have never thought about analytically before. They have a lot of demanding things to do—to produce some ideas, organise things, formulate a model, solve it, or what they want to know, see what the answer means in practical terms, decide if it is good enough and if not, improve it. In all this, they are finding a path through the problem themselves and not following a guide. So the problems must be much simpler mathematically than standard examples where the solution of nearly identical examples has already been demonstrated by the teacher.

Only well-internalised maths will be used, and certainly not what has just been learnt. There are several reasons for this: Mastery is important; you've got to be able to get the maths right if you are going to trust the answers enough to base decisions, even provisional decisions, on them. Also, if the mathematics is causing difficulty your attention will be diverted from the essential problems of the situation being studied. Most important, you must understand the model you are using really well if it is to help you understand the situation. This restriction is not as serious as it seems: a lot can be achieved with the abilities to:

- 1. set alternative possibilities to enrichment with a calculator; in-late observations and results;
- 2. set alternative possibilities to enrichment with a calculator; in-late observations and results;
- 3. set alternative possibilities to enrichment with a calculator; in-late observations and results;

Of course further skills, for example fluency with graphs or simple algebra, can increase the power of analysis enormously but even able students find this hard and it is extremely better to use simple maths effectively than to labour for sophistication. Many teachers find this hard to accept—delighting in the pupil who calculates the average speed which adds nothing to what is already clear from the shape of the histogram, for example.

Follow the pupils along their path through the problem—this self-denying ordinance is the hardest to sustain. The temptation to hint at the clearly superior route that one has found, and on which one is confident of providing sound assistance (I), is almost irresistible. However, we are teaching path finding, and it is a pity to turn a good problem into a routine exercise in following a path.

Encourage them to keep a record of everything they try—ideas, calculations, data collected and so on. When they feel they have done enough, ask for some sort of report of what they have achieved.

I hope that these brief, explicit suggestions to a teacher give something of the flavour of tackling real problems in the classroom. It is an activity that children enjoy provided they see the problems as of concern to them.

It can have a motivating effect on many 'conventional' lessons. A good piece of mathematics is latent; the ideas can look for situations which it might describe; such concrete illustrations also help to establish the mathematical concepts. It is an approach that is relevant to all stages from primary school to university. It is an essential ingredient of learning to use mathematics, even though it often produces the remark, delivered in condescending tones: 'But surely, Sir, this isn't maths.'

Hugh Burkhardt is Professor of Mathematical Education at Varingham University, Shell Centre, for applied mathematics, University of Varingham, in teaching 'real' problem solving.

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## GUIDELINES FOR ORGANIZATION

Ruth Townsend introduces the new Classroom Management Packs devised by the Avon Resources for Learning Development Unit

The Resources for Learning Development Unit was set up in 1974 as a teachers' cooperative to produce material for independent learning. The outcome of the Mathematics Project was a bank of resources for the 11 to 13 age range covering the topics of most syllabuses. The material was characterized by bright appearance, variety of format and a child-centred approach resulting from its authorship by practising teachers. The use in the classroom was, however, left as a matter for the teacher.

At the end of the unit's development phase, there was a realization that content must be matched to learning activity and that the management of resources in the classroom needed sustained investigation. Teachers planning courses can choose from class activity, group work and independent study, each of which has its own strengths and its own problems of management. At RLDU we have worked with teachers to provide outlines of courses for mixed-ability classes which exploit these strengths and provide the essential variety. At the same time, each editor has devised guidelines for the organization of each type of activity in his or her own subject.

It is an irony that those mathematics teachers whose view of the subject is most skills-based have been those most committed to class teaching. The work at RLDU suggests that this is a serious mismatch of method with objectives. Independent activities provide the best opportunity to cater for the needs of individuals. When pupils are acquiring skills and practising techniques, they need an individual programme through which to progress.

In solving problems and using skills, children, like adults, can learn much from each other, so we provide activities which require small group work where cooperation and communication are encouraged.

Class activity, too, has a place and teachers are encouraged to use it at the most appropriate stage. In all but the most homogeneous grouping, it is unproductive to teach skills by direct class lessons; but the teacher can initiate investigation, motivate, and summarize by the use of carefully-timed class activities, the best for relevance being whether every pupil will have an equal opportunity to participate and use language in context.

The emphasis on variety of activity puts the RLDU at variance with many other mathematics projects. Our system relies on the whole class being involved in work on the same topic at the same time; by a visitor to a classroom during any of the activity phases immediately recognizes that the topic is being taught. This is not to say that the child's life or the teacher's is made any less interesting. The use of display spaces, television, film, visits or micro-processor work in this situation is much to be welcomed.

Three classroom management packs have been produced as models of short courses of study (about four weeks) using a variety

of activities. It is hoped that teachers will devise their own using their school's particular objectives and incorporating existing resources as much as possible.

Each pack is designed, for first-year secondary mixed-ability groups of 30, but can easily be modified for streamed or setted classes. It consists of:

- resources for independent and group learning;
- a teacher's guide with suggestions for class lessons and extension;
- an analysis of resources and objectives;
- a network of the activities;
- Route cards for the pupils;
- a complete record-keeping system;
- storage boxes.

A handbook *A System of Classroom Management* gives guidance on maximizing the effectiveness of each learning style.

Classroom layout must encourage the use of all activities. The model classroom in Bristol has been organized with this in mind. The "dining room" layout has been discarded in favour of paired tables on the perimeter of the room, giving ease of access to the central resources and sundries. Pupils work in private "cave" when occupied independently, but small groups can be easily formed by the removal of a simple chip-board partition. In either case the teacher has a position of clear vision. For class activity the central area can be used.

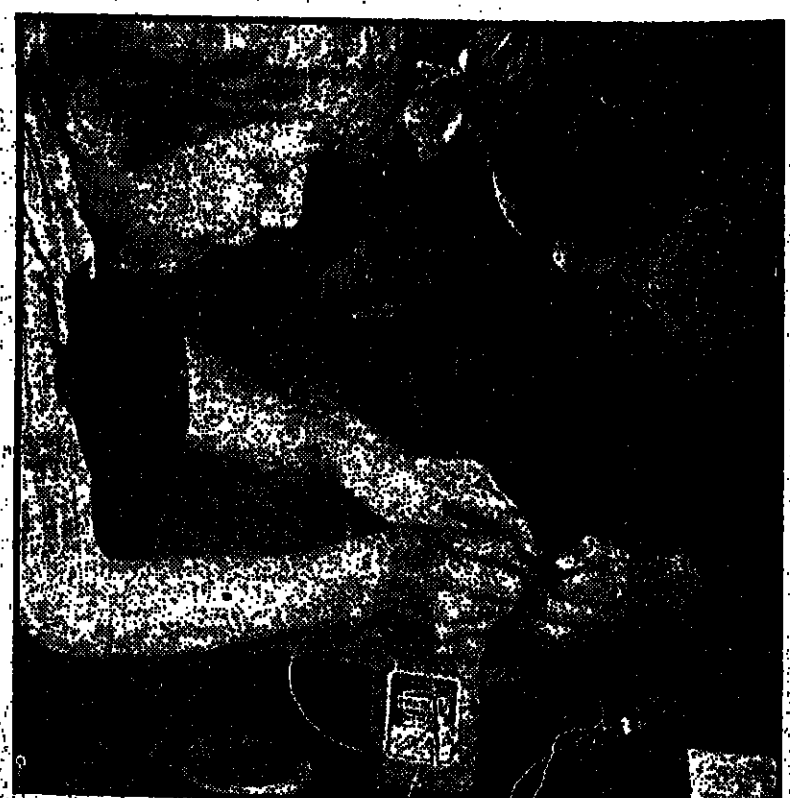
From the management angle, it is the independent learning that which causes most concern. We advocate a system of classroom organization where the most important feature is the consultation between teacher and pupil when a "contract" is negotiated. This consists of a series of activities, catering for the ability, needs and interests of the individual. Mathematics material has been found to be most effective if short and fulfilling, a few specific objectives. The pupils' contract is likely, therefore, to consist of up to eight individual or group activities. As a form of shorthand, there are route cards which list typical activities for various abilities. The contract might consist of a particular route or an entirely new set of activities.

The model aims to minimize the role of teacher as resource-holder and give maximum time for a private and calm consultation. It does, however, also take account of the need in mathematics for more frequent teacher-child interaction. There is an emphasis on self-reliance and an embargo on queues. Record-keeping is thorough and linked to the consultation.

Details of the classroom management packs *Number Patterns*, *Polygons and Statistics* can be obtained from RLDU, Redcross Street, Bristol BS2 0BA—Telephone Bristol 559491.

The *Mathematics Handbook* costs 50p from the same address.

Ruth Townsend is Project Editor, Mathematics at The Avon Resources for Learning Development Unit.



Designing the garden shed alarm bell during the garden project at Portobello Primary School, Walsall.

## MATHS MADE DIFFICULT

Towards a theory of taught helplessness. By John Kilburn

In school mathematics many children seem to be "baffled". Some don't understand, many pretend to. Generally uncomprehending, highly anxious, they try desperately to rote-learn "the method". Sometimes this works and sometimes it doesn't. Overall, though, the tactic is self-defeating, as more and more disconnected bits of information are learned or lost, so more and more earlier bits are forgotten or confused. The unhappy pupil feels increasingly incompetent, and eventually gives up.

We teachers might be helping this to happen. Certainly some recent work in social psychology suggests that we do. Martin Seligman set up some experiments in which dogs were put into a metal box. Naturally enough, when electricity flowed through the floor the dogs jumped out. However, if they had previously received a number of inescapable shocks they did not jump out. They lay there and took the shock.

Later, less drastic experiments indicated similar human responses. Seligman calls this "learned helplessness", the state of being in which people learn that no action which they can possibly take will alter certain consequences in their lives.

I recently heard this echoed at a party. A clever, articulate woman was saying that she was "mathematically illiterate" and she felt utterly "helpless" when confronted by the need to calculate. Other guests were nodding sympathetically. Such comments are usually made by intelligent people who wouldn't dream of saying that they couldn't read, but it is not only acceptable, but even socially productive, to talk like that about mathematics, because "helplessness" here is a common, shared experience.

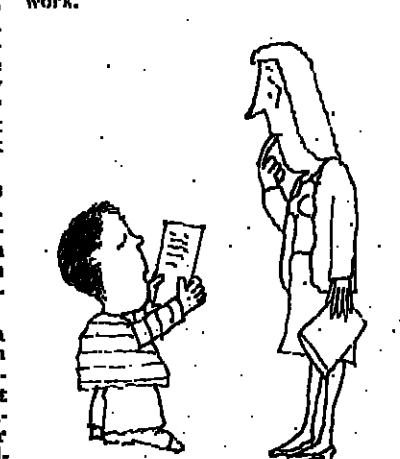
Mathematics makes many pupils anxious. One slip and the sum is wrong (and though we stress that marks are gained for correct working, our "hidden curriculum" usually emphasizes that a right answer is essential). Again, a major area of mathematical activity for young children is called "problems"—a word which in real life carries overtones of stress and difficulty. In his research on anxiety, J.B. Patrick writes about the effect of stress on problem solving and finds that efficiency falls drastically as anxiety rises, until subjects produce "rattled, hit-or-miss, child-like" behaviour.

Again, mathematics, much more than other subjects, has vocabulary difficulties. Words like "denominator", "intersection" and "modulus" create feelings of aversion, more so perhaps because they are "English" and cannot be said to be intrinsically difficult as foreign languages are.

A different argument applies to the actual teaching of mathematics. With a few pupils succeeding at the subject, many who later become teachers are not well qualified. In primary schools, for instance, 50 per cent have not even O level mathematics, but almost all teach the subject, the gap having at least two unfortunate consequences. One is understandable enough, but does not help the pupil. That is the insistence on sticking to a prepared lesson and refusing to go outside it for fear of being unable to explain something new, or answer an un-

prepared point. Thus, G.A. Reed reports that many pupils watch Open University maths programmes and go to school next day with questions their teachers cannot answer.

The other is equally disabling—simply wrong teaching, which, while it may lead to right answers immediately, actually misleads the pupil mathematically. A good example is the statement "when multiplying by ten, add a nought". This works for whole numbers, but obscures the core-concept of place value. When it is applied to  $7 \times 10$ , a severe feeling of helplessness is likely to be experienced as a trusted and taught method suddenly does not work.



Questions their teachers can't answer.

Unfortunately, it is also true that able maths teachers, unless they are sensitive and understanding, may, by their skills, render children

"helpless". Their speed of working, their effortless use of difficult words and symbols, their enjoyment of a subject which many pupils dislike, can distance them so far that they become threats rather than allies.

This also applies to a common but in me totally counter-productive practice, that is, the setting of "traps". I often find students hesitating to tackle a simple question because they cannot believe that it is as easy as it looks. Again, many pupils repeatedly have a weak self-concept cruelly confirmed as they fall headlong into the unnecessary pit which the teacher has dug (sometimes even unwittingly).

I was once given a multiple-choice paper to assess. One question read: "is  $1+1$  (a)  $1/6$ , (b)  $2/5$ , (c)  $5/6$ , (d)  $3$ ?" When I suggested that, for pupils, two possible answers pre-empted the correct one and thereby actually increased children's chances of mistakes, I received uncomprehending stares. But, to the "desperate memorizer",  $1+1$  might be  $1/6$  (did not somebody say, somewhere some time, "multiply the top by the top and the bottom by the bottom"?), or  $2/5$  (because  $1+1$  is  $2$  and  $2+3$  is  $5$ ).

There is another dangerous practice concerned with multiple-choice questions. Some teachers say "if time is short and you've lots still to do, guess the remaining answers. If you're put nothing you'll get no marks". Superficially, this is good advice—at least in the annual game of "beat the examiner". But it may carry a psychological penalty. C.L. Kleinke suggests that people who believe that the outcomes of their actions are controlled by luck will have one set of problems posed by an



... eventually gives up.

ness than people who believe that the outcomes of their actions are controlled by skill.

A shortage of teachers, with both remedial and mathematical skills, can also contribute to helplessness. A widely-practised procedure for "slow" children is "drill", i.e. more of the same. If the child still continues to fail, the similarity to the dog-shocking experiment is most marked.

Moreover, the disability generalizes—i.e. a pupil helpless at fractions will also believe that he or she is incapable of multiplying decimals.

Nor is that all. Other experiments suggest two even more disquieting consequences. Firstly, an experience leading to learned helplessness in one category (manipulating switches to turn off an unpleasant noise) also created difficulty in another task (solving anagrams). It is not a great change of emphasis to suggest that a child helpless in mathematics may also be handicapped in English, French, science. Again, experiments suggest that children who experience failure in one set of problems posed by an

adult will also expect to fail in other different circumstances if the same adult is involved.

This can have serious implications for primary schools and also for one teacher. Often, in secondary schools, it is children with learning difficulties who are so organized. This is not an argument for increased specialization, since the converse is also true, i.e. a child experiencing success with an adult expects to succeed in other contexts. What is important is that the adult should not be equated in the pupil's mind with failure.

Finally, our teachers' preoccupation with the written word is most disabling. Children talk better than they read, and work with things more confidently than they write. Even a good gardener, forced to work with a hammer, is made virtually helpless.

Until I came across Seligman's work I found it difficult to understand why so many people seemed to fail at mathematics, while appearing potentially competent. "Taught helplessness" may be the beginning of an answer.

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THE TIMES EDUCATIONAL SUPPLEMENT

## AN EXPERIENCE OF SUCCESS

Some aspects of the material for slow learners within The Kent Mathematics Project, described by Tony Lacombe

The Schools Council Project within the KMP started in 1975. Its work, aimed at pupils of least ability in mathematics in the age range 11 to 16, was the final part of the KMP material bank to be developed; the rest having evolved from the early 1960s. In the published version, the L material, as it is now known, will extend to about one-sixth of the total work in the material bank.

The bank is arranged hierarchically in nine levels. Pupils who have worked successfully in levels 7, 8 and 9 will be likely to gain good grades in O level. The L material has been developed parallel to the mainstream material, within the first three levels. Throughout the KMP, the key emphasis is upon matching each pupil's stage of mathematical development to the appropriate level within the material bank rather than deciding which mathematics is appropriate for a particular age group.

From the earliest days, the material and the system was tried out within the classroom, with the key question being "What happens with the pupils?" Material which was not workable, practicable, or was in other ways unsatisfactory, was discarded or modified in the light of this try-out until each item of teaching material or component of the system was found to be effective across a wide group of schools and very large numbers of pupils. Increasingly, however, the focus sharpened on that group of pupils whose needs were still not being met. This appeared to settle out to the lowest 20 to 25 per cent by ability.

The writing of the L project was preceded by an "observation" and "analysis" stage in which a great deal of time was spent watching the pupils at work and listening to their comments, as well as to those of the teachers dealing with these pupils.

The most noticeable observations in the initial analysis stage were:

Many pupils were unable to read many of the words used in the mathematics text.

Some pupils, though able to read the words, could not understand their meaning.

Some pupils able to read the words applied an inappropriate meaning to the language used, particularly where certain mathematical terms had other meanings in the pupils' parlance or where the language used by the pupil to describe the operation was not the language used in the text.

Other pupils could read and cope with the language but had significant problems with the mathematics presented. They were mathematically unready for it.

Many pupils, who were endeavouring to work appeared to lack the facility or willingness to search and, therefore, any confusing layout, reference to diagrams, tables, etc. was not overcome by the pupils sorting out what was intended. This, in turn, led to a breakdown in the work which was likely to fall into one of the following categories:

(a) A tendency to carry on impetuously oblivious of confusion and error. Such pupils were often very involved and busy but produced work appearing unrelated to the intended activity.

(b) A tendency to become totally inactive, anxious and, becalmed, often sitting staring at the page anxiously for an indefinite period of time.

(c) Almost all the pupils spoken to, over the 15 and 16-year-olds, talked freely about a "flood" which they had previously "floored" doing mathematics. Often this was as far back as in their infant school.

Pupils' comments appeared to suggest that they thought very little about themselves as "potential

adults. Such things as pay-slips, bank accounts, home buying, furnishing, becoming parents, etc. seemed to belong to another world.

Very seldom did the least able pupils appear to have a time-absorbing interest in sports hobbies, etc. Time out of school was usually spent in spontaneous social contact with a group which had no particular purpose or plan for activity.

The most significant aspects of the world in which they lived were quite clearly in the realm of experiences and attitudes. School was a place where the significant things were not to do with relevance of work but with the reality of feelings.

Teachers reported almost universally and often with surprise "The odd thing is if I give them a page of simple addition sums to do they are as happy as can be."

Teachers also reported that the pupils made frequent requests for reassurance. Many teachers commented "They are perfectly all right so long as I have spelled out exactly what they have to do."

Two significant conclusions were drawn from the observation stage which considerably influenced the subsequent development of the material.

Firstly, it would appear that it was not reasonable to assume that the often disaffected pupils with whom we were working displayed a hatred towards mathematics but rather a hatred towards failure at mathematics.

Second, if this is so then the challenge is to try to replace the syndrome of reinforced failure, with its attendant loss of self-esteem and disengagement with school by experiences based upon success and high self-esteem.

There is no doubt that this was a high-flown aim but the evidence already to hand based upon the use of the KMP system with brighter pupils gave us the encouragement we needed. From school after school using the mainstream material that was already available by 1975, reports had come back of the part of pupils who were working at a level where they were highly successful in most of their mathematics.

There were, of course, pupils who previously had enjoyed only partial success and a partial understanding when matched along with the pace dictated by the syllabus for the "whole year" group. There was

usually encouraging evidence of a few able pupils released from the boredom and impatience at being held up by the constraints of the syllabus.

In accepting the challenge, the strategies that emerged hinged upon an developing material that gave pupils an experience of successful mathematics working from the earliest age possible. For this reason, we resisted the temptation to commence by focusing our attention upon the question "What about the hardened, maths resistant, etc. pupils in the fourth and fifth year?"

Rather, we argued that if we paid attention to this question and our assumptions about reinforced failure were correct, then we were simply compounding the problem. We would never get to the cause of the problem, i.e. the needs of the mathematics learning needs of the pupils that led to the behaviour and attitude of the senior pupils.

When translated into action, these strategies have meant that the L material produced embodies the following general principles:

(1) Most L presentations are in work-card form. But for certain tasks the use of taped lessons has been found to be more effective. The following have been adjoined to it:

(a) As little verbiage as possible is used, but where necessary it is clearly arranged in small areas of writing.

(b) supported by teaching diagrams.

(c) embedded in short sentences using familiar words in preference to mathematical terms, where conflict arises.

(2) Clear diagrams and illustrations are used as much as possible, with particular attention paid to layout.

(3) Instructions are direct and specific. The point for active response is immediately after the instruction.

(4) Whenever possible, an equal approach is used where learning arises from activity rather than learning the principle first followed by practice.

(5) Active response is required continually.

(6) Conceptual steps are kept small.

(7) Only two or three carefully ordered new teaching points are incorporated in each workcard, with special care being taken not to introduce too many. In the case of tapes it is possible to include more teaching points.

(8) If appropriate, real life examples have been included, particularly in the level 3 material.

The material is being used within the standard pattern of the KMP system, which in a very abbreviated form is described thus:

When it has been decided at what KMP level the particular pupil needs to be working, the teacher selects a set of tasks from the material bank and to that pupil it is usual to find teachers of the level able pupils selecting six to 10 tasks. These tasks will form the work programme for the pupil, selected in advance. The tasks are sent out a sheet known as the KMP matrix.

Pupils choose the order in which the selected tasks are done, but on completion of each, the work is sent by the teacher who checks that the self-marking procedure has been used correctly and that the mathematical problems are cleared up. On completion of the whole matrix, the pupil is given a matrix test. A separate test corresponding to each task is available in the test book for the appropriate level. The pupil simply works at the test, which is related to the tasks on the matrix just completed.

This matrix test is marked by the teacher who is seeking to find where the learning has not been established. To this extent the tests can be seen as diagnostic, and course they relate directly to the work completed by the pupil. If the pupil has completed 100 per cent on the test or when the problems revealed by the test have been cleared up, the teacher selects a new matrix of tasks. Selection of new tasks from this material bank is made only by reference to the concept network which displays all the tasks available in a level. A copy of the concept network is also used as a record card for each pupil. By colouring in the tasks given on a matrix, the teacher can build up a visual record of what tasks have been given.

Included in the package is a teachers' guide which is a practical manual to explain fully the operation of the system.

Within the whole of the KMP material bank system, the emphasis is upon keeping every pupil at a point where a high level of success is being achieved while breaking new ground much of the time, in addition to planned repetition and reinforcement of work already mastered.

It is not intended that the total mathematics for any pupil is covered by work on tasks selected from the material bank. It is quite usual to find KMP supported by varying amounts of class and group teaching, enrichment, practice exercises, free choice, etc. But the material bank forms a very organized framework into which additional aspects can be integrated.

Loan sets of KMP L material for inspection are available from the publishers, Ward Lock Educational.

Tony Lacombe was seconded by the Schools Council from the classroom to write the material for slow learners within the Kent Mathematics Project from 1975 to 1977. He is currently serving as a teacher in the "Kent Local Education Authority."

## AN END TO LONG DIVISION

By Peter Kaner

Most people remember long division as a frustrating and confusing experience shrouded in mystery and danger, the diagonal tail of the calculations even running off the paper and on to the next page. Many an applicant for a job in industry has failed to get in because he or she could not answer the long division in the selection test.

The arithmetic tests of earlier years would include such corks as 28576 ÷ 92 as a matter of course, even though very few children got them right, because they sorted out who would get the vital scholarship to grammar school—and who would not! Nowadays, less than 10 per cent of the adult population could give a correct answer to 28576 ÷ 92 without the use of an electronic calculator.

When I used to teach long division the hardest step of all for children to grasp in the calculation was the first one: "92 into 28 won't go, so bring down the 5". They did not see what 28 had to do with it, and were even less certain about bringing down the 5. I quickly learnt to start with "how many 92s in 28000?"

Let me quote an example: 1,049 divided by 37. Look along the 37 line till you get to the largest number which is less than 1,049. This is 1,036, the product of 37 × 28. So the answer to 1,049 divided by 37 is 28, remainder 13. But, even better, you can now go on and divide the remainder by 37, and you will find that 1300 ÷ 37 gives the first two decimal places, and if you want more, just repeat the process.

The beauty is that children can see exactly what is going on. I knew that the design of these tables was going to be a great help to many children, and I was very anxious to try them out. I found my victims in an East London school, type 12, 12-year-olds, from a second year mixed-ability group. "Do you mean mathematical genius?" said the teacher, with a wry smile.

After 15 minutes of explanation, both of these children completed 36 long divisions in nine minutes, and all the answers were correct to two decimal places. Neither child could carry out long division successfully any other way, they were not even very strong on one digit division. Both felt that they had carried out the calculation, which was not their feeling when working with a calculator.

The boy asked "How much do those tables cost, mister?" and would have bought them on the spot, so pleased were they with the success. Both children felt that they understood the process, and never dreamt that division could be so easy. Success!

Once the tables had been constructed, I found that they were very versatile. They were offering a wide range of calculations and giving an experience of number and patterns which was of great value in arousing interest in arithmetic. (For example, did you know that 37 is a factor of 111 and so 111 ÷ 37 = 3?)

We all know the pattern of the nine times table, but what about the 99 times table? I have listed below some of the important calculations that can be done very quickly and easily and no doubt there are many more that will be found in due course.

(1) Multiplication: 2 figures × 2 figures. Instant solution, and by far the majority of multiplications which are needed in applications in other subjects or everyday life fall into this category.

(2) Advanced multiplication: 4 figures × 4 figures. For this, we use the tables on the first two figures of each number. This gives a very good approximation, and we check a calculator result. For an eight figure answer, the cross products

which on subtraction becomes

92 28576  
27600 300  
976



must be looked up and added on. This method emphasizes the flexibility of numbers themselves and also clarifies the traditional paper and pencil methods. Using the multiplication tables takes fewer steps than using logarithms and avoids the difficulties that logarithms hold for average children such as the characteristic and the risk of error in introducing "strange numbers" which have nothing to do with the calculation.

3. Division. Described above, pretty well all the division needed at CSE level is done in seconds, provided your pupil understands place value and how to manipulate his decimal point. (If he works with a calculator, he can check his table calculations will be much quicker than the traditional long methods so he can check many more examples.)

4. Fractions to Decimals. These can be read off the tables. For example, to find 7/11, you look for the nearest number to 7 in the 11 times table. This is 704 and gives 0.64 as the decimal equivalent correct to two places.

5. Squares. Squares lie embedded diagonally in the tables and are easily picked out. (In the published version, the squares are printed in bold type.)

	27	28	29	30
27	729	756	783	810
28	756	784	812	840
29	783	812	841	870
30	810	840	870	900

You can see that 28 × 28 = 784 at a glance, but you can also see the relationship between 28 × 27 = 756 and 28 × 29 = 812. The same relationship exists between 34 × 34 and 33 × 35, and so on. The tables show that the squares end in 1, 4, 9, 6, 5, 6, 9, 4, 1, 0 in a never-ending sequence.

6. Percentages. I leave it to you!

It is not everyday that one is able to construct teaching material which solves so many problems in such a simple way. Some years ago, I wrote in this paper that if we want higher standards of achievement in mathematics, we must question the traditions of technique and content. Brian and Mary, my 36 long divisions in nine minutes "came from a group of children who would not be expected to divide correctly, yet, after using the tables with this facility they were eager to learn more methods.

Finding answers on an electronic calculator does not build the confidence because, although it relieves the problems of obtaining a correct answer to a calculation, it does not reveal the "magic" of the calculation on which the magical chip. Solving the problem of long division has produced a crop of by-products which could well raise the numeracy of the nation by quite a few notches.

Peter Kaner's calculation tables, together with a new form of three-figure mathematical tables are to be published as New Mathematical Tables by Bell & Hyman (price about 90p). There is also a 16-page work book teaching the pupils how to use the calculation tables.

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Two copies.

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Инициатор: А. П. И.

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**TEACHER—HOME ECONOMICS (Ref 1358/TES)**  
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Experienced and enthusiastic teacher to join a team of six in the Home Economics Department. The subject is taught up to and including C.S.E. and G.C.E. 'O' and 'A' levels standards. The person appointed would be expected to participate at all levels.

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**KINGSWAY SCHOOL, FOXLAND ROAD, STOCKPORT**  
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**MANIPLE HALL SCHOOL, HILL TOP DRIVE, STOCKPORT**  
**TEACHER—MATHEMATICS (Ref. 1354/TES)**  
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and Science Faculty. If the intermediate course, based on the SMP work cards, is followed, with courses leading to C.S.E. and G.C.E. 'O' level (including Commercial Arithmetic at C.S.E.) thereafter, in the Sixth Form there are courses in Computer Studies and Statistics as well as modern 'A' level courses.

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**MARPLE RIDGE HIGH SCHOOL, HIBBERT LANE STOCKPORT,  
TEACHER—FRENCH & EUROPEAN STUDIES  
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**TEACHER—ECONOMICS & SOCIOLOGY (Ref. 1352/TES)**  
Scale 1  
To teach Economics and Sociology for G.C.E. 'O' and 'A' level courses in the Sixth Form. (Ref. 1352)  
Unless otherwise stated, application forms and further details obtainable from: quelling appropriate reference number, and returnable by 23rd May, 1986, to Head

تاریخ: ۱۴۰۲/۰۵/۰۵

Figure 1. The effect of the concentration of the *Agrobacterium* suspension on the transformation efficiency of *Agrobacterium* strains.























## THE COLLEGE OF ST. MARK AND ST. JOHN

### SENIOR/PRINCIPAL LECTURER PROFESSIONAL STUDIES LEADER (PRIMARY)



The main function of this post is to lead the college in reviewing and refreshing its primary professional work at in-service and pre-service levels in the light of the contemporary curriculum debate. We are looking for a person who has held a post of senior responsibility in primary schools and has experience of curriculum development. The person appointed will contribute to the teaching programme according to his/her expertise and interest.

### LECTURER II/SENIOR LECTURER IN CREATIVE DESIGN AND TECHNOLOGY

Applications are invited from well-qualified and experienced persons to teach mainly to B.Ed (Hons) degree level in engineering, technology, design and drawing, but also to take a share in the teaching of design in primary schools and the B.A. Hons degree, part-time B.Ed. degree and other in-service courses for teachers.

**SALARY SCALE:** £11,480-£27,880 under review S.T. £7,092-£24,712 under review S.T. £2,250-£10,352 under review. Further details of these posts are available by telephoning or writing to the Principal's Secretary, College of St. Mark and St. John, Barnfield Road, Plymouth, Devon PL6 8AA. Applications should be sent to the Principal, College of St. Mark and St. John, Barnfield Road, Plymouth, Devon PL6 8AA. Closing date: 15th May 1980.

Further details and application forms may be obtained by writing to the Principal's Secretary, College of St. Mark and St. John, Barnfield Road, Plymouth, Devon PL6 8AA. Closing date: 15th May 1980.

### Waltham Forest College

#### School of Catering

### Lecturers I In Food Preparation (2 Posts)

Required in this expanding department to teach Food Preparation and allied subjects to students on City & Guilds courses.

### Lecturer I In Home Economics

To teach Practical Cookery/Home Management and related subjects to students on the College Diploma in Home Economics, N.C.H.E.E. courses and City & Guilds Food Studies.

### Department of Sciences

### Lecturer I In Mathematics and Numeracy

To teach Mathematics on courses up to 'O' level. Experience and/or interest in lower level work is more important than higher academic qualifications.

**SALARY:** LECTURER, GRADE I, £4,178-£8,416 per annum. Application forms available from Principal (Staffing), Waltham Forest College, Forest Road, Walthamstow, London E17 4JB. Telephone No. 01-527 2311, Ext. 259.

Posts: £17 from 1.8.1980 - closing date 10 days from appearance of advertisement. All posts open to men and women.



### Cornwall Education Committee

#### Cornwall Technical College, Redruth

#### Principal: Dr. K. Farnell

#### FACULTY OF ART AND DESIGN

Applications are invited for the following three posts:

1. Lecturer Grade I in Scientific Illustration to contribute to the ONAA BA Hons Degree Course in Scientific and Technical Graphics. Applicants should have appropriate qualifications and experience as practising illustrators.

2. Lecturer Grade II in Photography the successful applicant will be expected to teach the creative use of photography, as well as the basic principles of practical work, to students of Graphic Design, Technical Illustration and Ceramics, up to fourth year SIAD Diploma level, and contribute to the BA Hons Degree Course in Scientific and Technical Graphics. He/she will also be responsible for the day-to-day running of the photography section. Applicants should have substantial professional experience as practising photographers.

3. Lecturer Grade I in Ceramics the successful applicant who should have substantial professional experience as a designer/craftsman or woman, will be required to contribute to DATEC Diploma and Higher Diploma studies in Ceramics. (This appointment might, in the first instance, be a temporary full-time post).

In all three cases previous teaching experience would be a strong advantage.

**SALARY SCALE:** Lecturer Grade I £4,306-£7,888. Lecturer Grade II £3,788-£6,438, according to qualifications and experience.

Further details and application forms may be obtained by sending a stamped addressed envelope to the Principal, to whom completed forms should be returned by Monday, 18th June, 1980.

### COLLEGES OF EDUCATION continued

#### GLOUCESTERSHIRE EDUCATION COMMITTEE

Applications are invited for the following positions:

**LECTURER IN SCIENCE** (Grade I) to teach Science to students on the B.Sc. (Hons) degree course. The successful applicant will be expected to contribute to the teaching of Science to students on the B.Sc. (Hons) degree course.

**LECTURER IN SCIENCE** (Grade II) to teach Science to students on the B.Sc. (Hons) degree course. The successful applicant will be expected to contribute to the teaching of Science to students on the B.Sc. (Hons) degree course.

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**LECTURER IN SCIENCE** (Grade XXIX) to teach Science to students on the B.Sc. (Hons) degree course. The successful applicant will be expected to contribute to the teaching of Science to students on the B.Sc. (Hons) degree course.

**LECTURER IN SCIENCE** (Grade XXX) to teach Science to students on the B.Sc. (Hons) degree course. The successful applicant will be expected to contribute to the teaching of Science to students on the B.Sc. (Hons) degree course.

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**LECTURER IN SCIENCE** (Grade XXXV) to teach Science to students on the B.Sc. (Hons) degree course. The successful applicant will be expected to contribute to the teaching of Science to students on the B.Sc. (Hons) degree course.

## City of Manchester

### EDUCATION COMMITTEE

#### Abraham Moss Centre

Crescent Road, Crumpsall, Manchester 8  
Tel: 061-740 1491

#### Department of General and Business Studies

### Lecturer II in Mathematics

To teach on GCE 'A' level and to take an area of responsibility within the Mathematics section of the Department.

Closing date 21st May 1980.

#### Fielden Park College of Further Education

Barrow Moor Road, West Didsbury, Manchester  
M20 8PQ. Tel: 061-434 4821

#### Department of Business Studies

### Lecturer I

To teach "People and Communications" on BEC General and national courses and to assist with the teaching of Spanish up to BEC National Standard.

Closing date for both posts 18th May, 1980.

Posts are available from September, 1980.

Further details and application forms may be obtained by writing to the Senior Administrative Officer at the appropriate College.

Further details and application forms may be obtained by writing to the Senior Administrative Officer at the appropriate College.

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## ilea colleges

### INNER LONDON EDUCATION AUTHORITY

#### CITY AND EAST LONDON COLLEGE

Pillfield Street, London  
N1 9BX

#### Department of General Education

Required as from 1st September, 1980.

### TEMPORARY LECTURER I IN NUMERACY AND NUMERACY

A temporary lecturer for numeracy and numeracy, to teach on the City and East London College course.

Salary scale £3,788-£6,438 per annum.

Further details and application forms may be obtained by writing to the Senior Administrative Officer at the appropriate College.

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## SOUTH WARK COLLEGE

The Cut, London SE1 8LE

#### Department of Business Studies

LECTURER GRADE I required in the above department from September, 1980, to teach on the City and East London College course.

Salary scale £3,788-£6,438 per annum.

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### COLLEGES OF EDUCATION continued

#### KENT EDUCATION COMMITTEE

Applications are invited for the following positions:

**LECTURER IN SCIENCE** (Grade I) to teach Science to students on the B.Sc. (Hons) degree course. The successful applicant will be expected to contribute to the teaching of Science to students on the B.Sc. (Hons) degree course.

**LECTURER IN SCIENCE** (Grade II) to teach Science to students on the B.Sc. (Hons) degree course. The successful applicant will be expected to contribute to the teaching of Science to students on the B.Sc. (Hons) degree course.

**LECTURER IN SCIENCE** (Grade III) to teach Science to students on the B.Sc. (Hons) degree course. The successful applicant will be expected to contribute to the teaching of Science to students on the B.Sc. (Hons) degree course.

**LECTURER IN SCIENCE** (Grade IV) to teach Science to students on the B.Sc. (Hons) degree course. The successful applicant will be expected to contribute to the teaching of Science to students on the B.Sc. (Hons) degree course.

**LECTURER IN SCIENCE** (Grade V) to teach Science to students on the B.Sc. (Hons) degree course. The successful applicant will be expected to contribute to the teaching of Science to students on the B.Sc. (Hons) degree course.

**LECTURER IN SCIENCE** (Grade VI) to teach Science to students on the B.Sc. (Hons) degree course. The successful applicant will be expected to contribute to the teaching of Science to students on the B.Sc. (Hons) degree course.

**LECTURER IN SCIENCE** (Grade VII) to teach Science to students on the B.Sc. (Hons) degree course. The successful applicant will be expected to contribute to the teaching of Science to students on the B.Sc. (Hons) degree course.

**LECTURER IN SCIENCE** (Grade VIII) to teach Science to students on the B.Sc. (Hons) degree course. The successful applicant will be expected to contribute to the teaching of Science to students on the B.Sc. (Hons) degree course.

**LECTURER IN SCIENCE** (Grade IX) to teach Science to students on the B.Sc. (Hons) degree course. The successful applicant will be expected to contribute to the teaching of Science to students on the B.Sc. (Hons) degree course.

**LECTURER IN SCIENCE** (Grade X) to teach Science to students on the B.Sc. (Hons) degree course. The successful applicant will be expected to contribute to the teaching of Science to students on the B.Sc. (Hons) degree course.

**LECTURER IN SCIENCE** (Grade XI) to teach Science to students on the B.Sc. (Hons) degree course. The successful applicant will be expected to contribute to the teaching of Science to students on the B.Sc. (Hons) degree course.

**LECTURER IN SCIENCE** (Grade XII) to teach Science to students on the B.Sc. (Hons) degree course. The successful applicant will be expected to contribute to the teaching of Science to students on the B.Sc. (Hons) degree course.

**LECTURER IN SCIENCE** (Grade XIII) to teach Science to students on the B.Sc. (Hons) degree course. The successful applicant will be expected to contribute to the teaching of Science to students on the B.Sc. (Hons) degree course.

**LECTURER IN SCIENCE** (Grade XIV) to teach Science to students on the B.Sc. (Hons) degree course. The successful applicant will be expected to contribute to the teaching of Science to students on the B.Sc. (Hons) degree course.







## FRANCE

BRITISH SECTION, LYCEE INTERNATIONAL,  
ST. GERMAIN EN LAYE, PARIS

The section, one of eight in this unique French State School, of high academic reputation, aims to maintain and develop the English of local British children and of children returning from abroad. Classes lead to C.E.O. Level and the International Baccalaureate. St. Germain is in the residential western suburbs of Paris.

Required for September, 1980:

## ENGLISH TEACHER

Experienced Graduate Teacher of English (possibly responsible for Drama), with working knowledge of French (Scale 2 or 3 according to experience). Contract will be for an initial period of two years, renewable. Salary: equivalent to Burnham Scale, plus 20 per cent cost of living allowance, rent allowance, removal expenses at beginning and end of contract, home leave and maintenance of British superannuation. Short-listed candidates will be interviewed in St. Germain.

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International Language Centres Ltd.  
24 Old Road Street, London, W.1  
Tel: 01-499-9487

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An independent Primary School for  
mainly British childrenMUSIC TEACHER  
Required for September, 1980

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YOUTH AND  
COMMUNITY SERVICE  
continuedLONDON  
INNER LONDON EDUCATION  
AUTHORITY

## TOTAL TEAM YOUTH CLUB

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STATES OF JERSEY  
EDUCATION COMMITTEELONDON  
INNER LONDON EDUCATION  
AUTHORITY

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## Ministry of Education

## Vacancies

## TEACHERS

There will be vacancies with effect from May and September, 1980, for teachers in schools controlled by the Zimbabwe Ministry of Education. Enquiries are invited particularly from male primary school teachers and certificated graduates with high school experience.

Application forms and details of the attractive conditions of service may be obtained by writing to:

The Secretary for Education  
P.O. Box 8022  
Causeway  
Salisbury  
Zimbabwe

## Education Service

## SANDY YOUTH CLUB

DEPUTY YOUTH  
WORKER

At this well-established Club which meets in purpose-built premises on the campus of Sandy Place School.

The post offers excellent experience to a suitably qualified candidate within a progressive and expanding Youth Service which offers In-Service Training and regular support sessions. Assistants will be given towards approved removal expenses, legal and estate agents' fees, plus lodging allowances.

Salary within the J.N.C. Scale 1 for Qualified Youth Workers, £3,747 to £4,731.

Application forms and full details may be obtained from the Chief Education Officer, County Hall, Causeway Street, Bedford MK42 9AP, to whom completed forms should be returned as soon as possible.

Closing date: 22nd May, 1980.

Bedfordshire  
COUNTY COUNCILSenior Lecturer in Hotel  
and Catering Administration

Upto £8,570 p.a. + 25% gratuity on total salary

- Maximum tax 15%
- Medical benefits
- Dental benefits
- Free passages
- Generous terminal leave
- Subsidised accommodation
- Children education allowances
- Holiday visits for children

Applications are invited for appointment as Senior Lecturer in the Department of Hotel-keeping and Catering, in a technical institute of the Education Department. The successful candidate will act as a Deputy Head of Department and, apart from assisting in the organisation and development of courses, will lecture on hotel-keeping, food, catering, bar work, and related subjects to post-secondary students.

Applicants must have (a) an appropriate technical qualification (e.g. membership of the Hotel Catering and Institutional Management Association (UK) and a year's relevant post-qualification experience; OR (b) an appropriate British degree (e.g. in Hotel and Catering, Administration) and a Certificate in Education, or equivalent, and 7 years' acceptable teaching experience; OR (c) an appropriate British degree (e.g. in Hotel and Catering Administration) and a year's relevant post-qualification experience. Preference will be given to those who can speak both Cantonese and English.

Appointment will be for only one agreement of 2 years. The salary scale is from HK\$6,350 to HK\$8,000 per month (approximately £6,800 to £8,570 p.a.). Starting salary will depend on experience.

For further information and application form, write to the Hong Kong Government's Office of Grants, Room 1005, 10/F, 100, Queen's Road Central, Hong Kong.

Hong Kong Government

OVERSEAS  
Appointments  
continued

## ARGENTINA

## ST. GERMAIN EN LAYE, PARIS

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NEW ZEALAND  
EDUCATION OFFICELONDON  
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Major, qualified YOUTH WORKER, for one year, to work on a full-time basis, with a view to developing a youth club in the residential western suburbs of Paris.

Required for September, 1980:

Experienced Graduate Teacher of English (possibly responsible for Drama), with working knowledge of French (Scale 2 or 3 according to experience). Contract will be for an initial period of two years, renewable. Salary: equivalent to Burnham Scale, plus 20 per cent cost of living allowance, rent allowance, removal expenses at beginning and end of contract, home leave and maintenance of British superannuation. Short-listed candidates will be interviewed in St. Germain.

Apply by letter, curriculum vitae, names and telephone numbers of at least two referees, as soon as possible to: The Headmaster, British Section, Lycée International, B.P. 128, 78101 St. Germain en Laye. Further details will be sent to all applicants.

ENGLISH  
LANGUAGE TEACHERS  
TRIPOLI

International Language Centres Ltd. will have several vacancies for teachers in their school in Tripoli, Libya, from late August, 1980.

Candidates should hold a degree or Cert. Ed. and applications are invited from both male and female teachers. Contracts are for a minimum of one year. The basic salaries £2,820,000 Libyan Dinars per annum with increments according to qualifications and experience. Free accommodation, return air fares, relocation allowance, terminal gratuity, and six weeks' holiday per year.

For details and application form apply to:

Personnel Department (Libya)  
International Language Centres Ltd.  
24 Old Road Street, London, W.1  
Tel: 01-499-9487

ENGLISH  
LANGUAGE TEACHERS  
KUWAIT

International Language Centres Ltd. invites applications from English Teachers, preferably with a minimum of two years' experience in TEFL, to join an already established language training team. Candidates should be holders of bachelor status and should hold a degree or Cert. Ed.

Contracts are for a period of one year from mid-August. The basic salary, which is tax-free in Kuwait, is 3,780,000 Kuwaiti Dinars per annum with increments for qualifications and experience. Return air fares, relocation allowance, housing and daily transportation to the teaching site are provided free. Paid holidays are six weeks per year, in addition to Kuwaiti Public Holidays.

For details and application form apply to:

Personnel Department (Kuwait)  
International Language Centres Ltd.  
24 Old Road Street, London, W.1  
Tel: 01-499-9487

KUWAIT  
THE ENGLISH SCHOOL—FAHAHEEL  
An independent Primary School for  
mainly British childrenMUSIC TEACHER  
Required for September, 1980

Adaptable single female teacher of British nationality, aged 25-35 years, capable of teaching MUSIC to all classes from four to 11 years, with ability to organise Percussion work, train Choir, prepare children for Competitions, etc. (Primary teacher with piano to Grade 8 may be suitable). Four years' recent experience essential. Applicants must hold valid British Driving Licences. TERMS: Minimum salary, commensurate with experience, Kuwaiti Dinar 2,976,000 per annum (current exchange rate K.D. 1,000 = £1.82). No income tax here. Free shared accommodation with free utilities, free medical cover and insurance. Generous 'sitting-in' allowances: local, 'leave' and long summer vacation. Return air passage upon efficient completion of one-year contract, which could be renewable.

Detailed letters of application, stating qualifications, experience and specific interests, with copies of all test-motivations held, names of two referees and Passport photographs to the Headmistress, THE ENGLISH SCHOOL—FAHAHEEL, P.O. Box 7208, FAHAHEEL, KUWAIT, ARABIAN GULF by 28th May.

ZIMBABWE  
EDUCATION OFFICELONDON  
INNER LONDON EDUCATION  
AUTHORITY

## TOTAL TEAM YOUTH CLUB

## P.O. Box 1

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